

Sir Douglas opposes delay on London Bill

by Sue Reid

A strong argument in favour of London University submitting a private Bill to Parliament this autumn to enable it to try out major constitutional reforms has been put forward by Sir Douglas Logan, principal of the university. He maintains that if the Bill is not promoted in the next session it will mean a painful delay in bringing about changes.

In the third report of the university's consultative committee, set up to promote discussion on the Murray Report, Sir Douglas warns that to delay the main reform, which proposes making the vice-chancellor its full-time salaried, academic and administrative head, will seriously impair the university's efficient running.

He adds that Parliament should be given an early opportunity to decide whether the four statutes proposed by the university, which were disallowed by the Privy Council in May, are in the interests of the university or not.

Last month the university senate voted to defer its decision on the arrangements for depositing the Bill. The committee's wording of a recommendation that the senate should consider proposed arrangements for submitting the Bill on November 27 was changed after the London

School of Economics and Bedford College succeeded in getting an amendment carried to delete the autumn deadline.

The LSE has opposed plans to introduce the Bill this year.

The senate will now consider the matter again in October or November after comments have been received on the newly-published draft Bill from the governing bodies of the schools. The last date the Bill can be submitted for consideration in the next session is November 27.

At last month's senate meeting the third report, which shows a large measure of agreement about the aims of the Bill, was also considered. In the report, which sums up comments on the whole issue, Sir Douglas estimates that to defer depositing the Bill until November 1976 would mean that the statutes would not be implemented until 1979 at the earliest.

He believes it is wrong in principle that the university should not be able to change its constitution, after proper consultation, to meet changing circumstances, and is strongly in favour of releasing it from restrictions placed on it by the University of London Act 1926 which limited the senate's powers to amend statutes.

Vets look gift report in the mouth

by Alan Cane
Science Correspondent

Opinions were divided in the veterinary schools this week over a proposal that the Government should spend £250,000 to buy veterinary practices for the schools that do not have them (*The Times* August 1, 1975).

The proposal was one of the chief recommendations of a committee of inquiry into the veterinary profession chaired by Sir Michael Swann, chairman of the BVC and a former vice-chancellor of Edinburgh University, which reported last week.

It has for the most part been warmly received by the veterinary schools who have endorsed most of the chief recommendations.

Professor G. H. Arthur, chairman of the board of Bristol University Veterinary School, said that even if none of the recommendations was implemented, the report had collated an invaluable mass of detailed information.

Opinion on whether the university should be bought a practice was divided in the school; some people argued that it was difficult to integrate veterinary teaching with clinical practice. He thought, however, that the school could obtain a reasonable practice for £50,000, one fifth of the money suggested in the Swann report for the five schools.

At Cambridge, Mr F. R. Spratling pointed out that the university already had a small practice,

together with a university farm, and that that opinion was split over the value of a full-scale practice.

Many found them a mixed blessing, arguing that the practice staff tended to become isolated from the teaching staff at the school resulting in increasingly smaller levels of collaboration.

Professor W. I. M. McIntyre, dean of the Glasgow University Medical School, argued trenchantly for the Swann recommendation. He said: "There is an honest difference of opinion in the schools over the need for practices, but I have no doubt that this recommendation is the only hope we have of progress."

He went on to explain that the practices would have to be run by the senior academic staff in the schools. With the new emphasis on preventive veterinary medicine engendered by the Swann report, it was essential that academic staff should be given clinical experience in real conditions.

Professor McIntyre thought the Swann committee had erred on the conservative side in recommending only £250,000 for all five schools—Bristol, Cambridge, Glasgow, Liverpool and London (Edinburgh already has a practice). To be effective at least £500,000 should be spent on each school. At least 200 farms should be included in each practice. All the schools welcomed the recommendation that the Agricultural Research Council should spend more money on research in the schools.

Professor McIntyre thought as much as 10 per cent of ARC research money could usefully be spent in the schools, pointing out the big differential in the amount the Medical Research Council spends on research in the universities compared to the ARC.

Professor McIntyre said he believed that the Swann report represented a breakthrough which would eventually lead to the establishment of a consultant class within the veterinary profession.

He thought that about 50 of these specialist, but he did not believe the work could adequately be done by general practitioners.

It was essential that the recommendations of the report on practices be implemented so that prospective consultants could attain the necessary training and experience.

Professor Arthur of Bristol said the point that veterinary education is not more expensive than medical education, because many veterinary school costs are disguised through the contribution of the Department of Health and Social Security.

The Agricultural Research Council said this week that it was working at the report and would be reporting on the specific cases in due course. It said it was keen to support worthwhile research in the universities and was open to suggestions from the veterinary schools for research projects.

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Student role in Portugal crisis

Universities spark revolution and go on fighting

by Ben Pimlott

A feature of revolutions is that students tend to play a prominent part in them and this is certainly true of the revolution in progress in Portugal. Although the coup which overthrew the Caetano regime came from the Army, the influence of revolutionary ideas in the universities was important in bringing it about, and students have been in the forefront of the myriad ultra left groups—Maoists, Trotskyists, anarchist-syndicalists—which have acted in many ways as revolutionary pacesetters. What is notable (but perhaps not surprising) is that transfer of control in the Ministry of Education and Culture since the coup to ministers and officials whose sympathies are broadly with the orthodox Communists and their allies has failed to dampen the fires of campus revolt.

Before the coup, in a highly repressive society where any statement of opposition or publication could lead to arbitrary arrest, torture and indefinite imprisonment, universities were oases of relative liberalism. Almost entirely restricted to the children of Portugal's small middle and upper classes, higher education was regarded as a sector where a limited degree of youthful rebellion was tolerable or at any rate unavoidable. This did not make the faculties safe or free. Students were frequently arrested and beaten by the PIDE, the notorious secret police, and student demonstrations were automatically broken up.

In many faculties academic preferences were heavily based on political factors and any association with the opposition groups was a bar to appointment. Nevertheless, there were many professors who were hostile to the intrusion of political thuggery on to the campuses, and the social position and youth of students (most started at 16 or 17) helped to give them a comparative immunity from the kind of treatment meted out to peasants or workers who involved themselves in clandestine activity.

Hence the universities were able to become centres of left-wing opposition to the regime and movements such as the *Movimento da Esquerda Socialista* (MES), founded in the early 1960s, and the *Movimento Reorganizador do Partido do Proletariado* (MRPP), set up in 1970, developed a strong base among students and junior lecturers. The April 1974 coup occurred in

part because the ideas discussed and developed in the universities were allowed to spread to the Army.

By the early 1970s the vast majority of lower ranking officers in Africa were conscripts, many of them university students who could obtain a commission after one year of study and four or five months' military training. The students took left-wing politics to Africa and in many cases brought Africa and African approaches to revolution back to the universities when they returned to complete their studies. A cross-fertilisation of ideas between students, young lecturers and junior officers created the basis of the Armed Forces Movement (MFA), the main dynamo of the revolution.

When the coup came the students felt that in a very immediate sense it was their revolution, and they acted accordingly. With power in the faculties transferred to committees on which teachers and students were equally represented (and which were subject to the sovereign authority of full general assemblies) the expulsion of professorial staff associated with the old regime was widespread. In some faculties the students went much further. Lisbon's Faculty of Law, in particular, rapidly transformed itself from a bastion of the old establishment into a revolutionary commune.

Initially the Communists, whose heroic record of resistance to fascism over several decades was widely admired, were able to control the faculty through the Union of Communist Students. This did not last long. The Maoist MRPP, calling for full democracy within the faculty and direct revolutionary action outside it, was far closer to the students' mood than the orthodox Communists who emphasized discipline and stressed Alvaro Cunhal's strategy of restraint. Hence the MRPP student organization, Students' Movement for Marxist-Leninist, was able to oust the Communists, take over the faculty and replace the entire teaching staff of 60 professors and lecturers with MRPP adherents or sympathizers.

Mostly young, including some about degree or whose formal training was in other disciplines, these new teachers have implemented student demands to emphasize Marxism-Leninism in the curriculum and reject any kind of grading or selection through examinations.



The Ministry of Education and Culture has regarded political developments on the campuses with a combination of indulgence, disapproval and impotence. Until May, 1975, teaching staff expelled by students were receiving salaries, while elected teachers were not; now the ministry is paying both. The main crisis, however, has arisen not over appointments but over examinations. The students (including many not on the ultra left) consider selection and assessment which involves grading to be elitist and destructive. The ministry is concerned to maintain standards and not exceed quotas. The result of this clash has been stalemate and disarray.

The problem has just been widened by the grading in many institutions has been limited to a simple 'pass or fail' distinction but more acutely at the level of entrance requirements. Following the April 1974 coup, pressure from teachers and students resulted in a drastic lowering of the standards for entrants so that last year there were scarcely any failures in the qualifying exam. The result was greatly to intensify the problem created by a 'bulge' of applicants caused by an influx of repatriated colonialists and demobilised soldiers and by the coming-of-age (for which no provision was made) of a large cohort of young people.

£28m building plan signals student cuts

by Brian MacArthur

There was widespread disappointment this week at the size of the 1976-77 building programme. At £28m, it is exactly half the programme for 1975-76, although student numbers are expected to increase by up to 15,000 in the new academic year.

Since new buildings take several years to design and construct, the programme was seen as the first serious indication that the Government is considering a further reduction in the student target of 640,000 by 1981-82.

In his announcement last week, Mr Mulley, Secretary of State for Education and Science, said that he would incur heavy repayments on buildings to a value of about £28m at current prices (explained later as being in real terms). The University Grants Committee is getting £8m of the £28m, compared with a share of £15m from a total programme of £55m for 1975-76.

On the college and polytechnic programme, the DES is now asking local authorities to submit plans (which some may be reluctant to do in present circumstances) and decisions are expected by the end of October. If inflation continues, the £28m may be increased.

A university student residential place now costs about £3,000, half of which is expected to come from loan subsidy.

Some 650 residential places can be built for £1m, although universities would incur heavy repayments on other £1m.

Out of the £15m in the 1975-76 year, more than £3m went to residential places, some £2m was allocated to modernizations and modifications to meet the new Fire Precautions Act, about £5m went to student teaching places and £500,000 was for computer buildings.

There were only three major buildings—the Arts Centre at Warwick (£1.5m), an accountancy building at University College London (£1.75m) and a £1m contribution to the Salisbury Art Centre at East Anglia.

A building programme of £8m will not therefore build very much. The priorities of the UGC are expected to be for medical places and residence, as well as some work on computer buildings, better time-tabling and on fire precautions.

Colleges and polytechnics have received the same proportion of a smaller programme as last year, another indication of the Government's commitment. They are now anxious to know if their £20m will be divided equally between polytechnics and colleges.

Dr. George Tolley, director of Sheffield Polytechnic, said that it already needed up to £2m of building to meet DES standards. Sheffield was not the only polytechnic where the number of courses was growing, where there was a squeeze on local spending, and now a small building programme. Student admissions might have to be cut next year.

Universities are expecting student numbers to grow by about 9,000 in 1976-77 to a total of around 260,000—the addition of another 10,000 to the system—and the polytechnics expect a growth of about 5,000 or 6,000 to a total of 90,000 degree students.

NOTES: Further education figures are cut, which is always lower than the announced figure. University figures are for 'starts' (the number of students starting a course) and not 1975-77 figures are programmes not starts.

Meeting ends PNL era

A chapter in the history of the Polytechnic of North London was closed last week when the joint polytechnic/university London Education Authority advisory committee held its eighteenth and probably final meeting.

The committee, which was set up in December, 1973, to look into the development of the polytechnic, warmly welcomed the recent report on the polytechnic by the Council for National Academic Awards.

It congratulated the staff and students on the "considerable progress" that has been made. The polytechnic's future was now better assured, it said.

The committee is to submit its own final report to the authority and to the polytechnic governors. It will recommend extending the physical development plan and continuing to revise the academic plan. The polytechnic should establish its resource priorities and improve its services by their reallocation, it suggests.

The committee thanked Mr Jack Straw, its chairman, and the polytechnic and authority staff for their work. The committee will recommend to the governors and the LEA that it be formally disbanded.

Inquiry sought into examination

The Students' Union Society of University College, Cardiff, has asked Mr Muller, Secretary of State for Education, to conduct an official investigation into allegations over marking of examinations in the economic and social studies faculty.

A letter to Mr Mulley from Mr Stuart Barber, society secretary, alleged that differing standards have been applied in examination results in 1974 and 1975 and that three students had been treated in an "unjust and unfair manner".

Professor C. C. Magee, dean of the faculty, was not available this week to comment on the allegations.

Grants delay warning

Students may not receive their grants in time for the next academic session because of delays by the Department of Education and Science in issuing new grant regulations under the Education Act 1975.

Save Fircroft jobs-report

The Council for Academic Freedom and Democracy has called for immediate action to avert the threatened closure of Fircroft College, Birmingham, and save the jobs of its four full-time academic staff.

In a special report published this week the council asks that the present freeze on admissions, imposed pending a Department of Education and Science inquiry into the future of Fircroft, be lifted.

Trouble began at Fircroft, an adult education college, earlier this year when the students refused to recognize the principal, Mr Tony Corfield, and introduced their own education syllabus.

When the college was threatened with closure by the trustees, the students occupied the main buildings and were only removed after court action. The trustees have said that the closure will be temporary and admissions will be suspended for the 1975-76 intake until after the DES inquiry.

The council claims that this is unfair penalization of the jobs of the staff. It states that the education programme is a significant advance in the organization of post-school education in Britain. The report calls for a complete overhaul of the college authority with a view to ending administration by the Fircroft Trust.

Deprivation study under way

A research programme into the cycle of transmitted deprivation, sponsored by the Department of Health and Social Security and organised by the Social Science Research Council, is now well under way. Eleven study projects by academics throughout the country have already been approved.

The seven year programme, which began early last year, lays emphasis on the recurrence of social problems through successive generations, but also hopes to examine those people who manage to break out of the cycle.

A joint working party of the DHSS and the SSRC has said that it aims to support research that attempts to establish how far deprivation is inherited and to explain why this should be so.

To help clarify the concept of deprivation Mr Geoffrey Hawthorn, of the University of Cambridge, has

Leeds to validate voluntary college broad-based degrees

by David Hencke

The College of York and Ripon St John is to be one of the first new voluntary colleges to offer a new range of degree and diploma work outside teacher training.

Leeds University announced last week that the college has received validation for awards of Bachelor of Arts and Bachelor of Science ordinary and honours degrees, and the Diploma of Higher Education. Students will be able to take a combination of two subjects, and in the case of some science and mathematics courses, a combination of three.

Mr J. V. Barnett, principal of the new college, which has been formed by combining two Anglican colleges of education, said the new courses were designed to attract students who wanted a broad range of opportunities.

The college will be able to offer 18 different subjects in various combinations and students taking the new degrees will study alongside trainee teachers.

The balance between students taking teacher training courses and general degree courses will change in the next few years. Only 55 stu-

dents will enter the college to take general courses in September but by 1981 the numbers will rise to 800 of the 1,600 students.

Those taking initial teacher training courses will decline rapidly. The college is to become the base for the new York and District Education Centre which opens on September 1 and will serve a wide area of North Yorkshire.

Leeds University has also announced the awards of new degrees for four other colleges in its area training organization. Trinity and All Saints College, a large Roman Catholic college on the outskirts of Leeds, will be offering a bachelor of education (ordinary and honours), a bachelor of arts and bachelor of science ordinary degree and a postgraduate certificate of education course.

The city of Leeds and Carnegie College will offer a BEd ordinary and honours course and a PGCE. North Riding College of Education, Scarborough, will offer a diploma of higher education and certificate in education and a BEd (ordinary and honours).

Bretton Hall College of Education, Wakefield, will offer a certificate in education and a BEd (ordinary and honours).

Aigrain challenges physicists on future

Physics faces a depression in the near future, according to Professor Pierre Aigrain of the University of Paris and formerly Director of Higher Education at the French Ministry of Education.

Physicists were just about to give up their argument of many years that money spent on physics paid off in technological advances, just when for the first time this seemed to be true.

Professor Aigrain saw three main areas of change in the near future. First, the search for elementary particles would cease. It was extremely expensive and he was doubtful whether the outcome would be of technical rather than philosophical importance.

Second, the computer would be used more for interpreting complex models and simulating experiments. Finally, he thought the time had come to re-evaluate the thermodynamics

Use facilities more efficiently Dr Hampson says

The higher education sector had to be more efficient in its use of land and resources, Dr Keith Hampson, secretary of the Conservative Party's education committee, warned this week.

Lord Crowthorne-Hunt had been effective means of analysis or control at his disposal and had been hopeless at creating incentives for better practice, he said.

Replying to a parliamentary question from Dr Hampson on the department's provision for identifying underused capacity in universities and polytechnics, Mr Keith Mulvey, Secretary of State for Education, said the University Grants Committee kept an estimate of capacity in the country, which could be compared with student numbers in particular subjects and used for forward planning.

Similar information on polytechnics was obtained from local authorities and the DES was in the process of setting up a committee of Directors of Polytechnics, which would report capacity in the polytechnics, he said.

External student problem for study

The Technician Education Council has set up a working party to consider how to cater for external students—those who do not have access to a college offering their course regularly because of constraints of home or work.

The working party will consider how to extend present provision for technician education, rather than create alternatives. It will make proposals to the council at the end of the year.

NEXT WEEK

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Hall of residence costs

The case for literary seminars
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Weathermen sweat out ice age

by Alan Cane, Science Correspondent

The world is getting colder and will be colder for several decades, according to Professor Hubert Lamb, director of the Climatic Research Unit and the University of East Anglia. However, his forecast is not shared by all weather experts.

So next week should see a lively exchange when the world's weathermen meet at East Anglia for a long conference on climatic change. Entitled "Long term climatic fluctuations and the future of our climate" and sponsored by the World Meteorological Organization and the International Association for Meteorology and Atmospheric Physics, the conference will bring together the most broadly based group of weather specialists ever assembled.

There will be meteorologists, mathematicians, paleoclimatologists, marine biologists and geologists from Britain, America, Russia, France, Germany, Canada, Sweden, Denmark, New Zealand and Norway.

The last time there was a similar meeting was an American conference in 1972 where geologists and

meteorologists first began to try to see each other's view point—the meteorologists realized with shattering force just how near the geologists believed the end of the present interglacial period to be. In layman's terms, the return of the ice was just around the corner. However, this view has moderated a little since.

Professor Lamb says there is widespread agreement that the weather in the first half of this century has been typically stable. It will be much more volatile in the remaining years of the century and that will mean long periods of extreme weather—long hot periods, long cold periods, long wet periods, long dry periods.

He says we are still a long way from the accurate prediction of next year's weather or even tomorrow's weather, but believes we are getting close to what he describes as an "actuarial" type of prediction, based on experience and probability. And he firmly rejects the lay view that such predictions teach only a little advanced on red skies at night, or the angle of the moon in darkest East Anglia the crescent moon lying on its back is taken as a sure sign of rain.

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Bucks students seek local authority grants

by David Walker

Two students accepted by the University College at Buckingham are to apply to their local authorities in the hope of getting discretionary grants to study for its two-year licence.

Professor Max Beloff, the principal, said the college was waiting to see whether local education authorities would finance students for the courses in law and economics being offered at the "Independent University". Individual students who applied would be helped in their negotiations with their authorities.

The college has recently begun an advertising campaign to attract students, leaving applications from school leavers for the courses which begin in February next year. The advertisements give prominence to the fact that the Law Society and the Bar Council have recently recognised the Buckingham qualification as giving exemption in professional examinations.

The college plans to take 80 to 100 students, excluding a number of Americans who will be following special courses. Dr J. C. Clarke, fellow of All Souls College, Oxford, the Buckingham dean of admissions, said it had no ideal ratio of applicants to number of places offered.

"We will take the best that comes along. The largest single group of applicants are those leaving school. They must have two A levels but we are not niggling about grades."

Professor Beloff said he expected most applications to come in the early autumn. The prospectus, published in March, just missed the schools' Universities Central Council on Admissions deadline, he said, and many pupils were waiting till they had a rough idea of how their UCCA applications fared before considering the college.

The college is making much of the informal assurance it has received from universities about its licence being recognised as a qualification for postgraduate work. Glasgow, the London School of Economics and Reading have given definite promises, while Birmingham and Manchester have promised sympathetic consideration.

Officially London University, whose regulations subsume those of the LSE, will consider each postgraduate application on its merits while Manchester University says the whole matter is still under consideration.

The college is offering about 25 scholarships for which candidates will take examinations during the summer. Dr Clarke emphasized that candidates of "sufficient merit" will have to present themselves before the scholarships are awarded. He said the college's "open days" had attracted representatives from over 80 schools. He had visited a number of schools to advertise the college.

Professor Beloff said only a few universities had offered recognition because there would be only a small number of licentiates going on to postgraduate work and at this stage a pilot scheme was all that was necessary.

Fewer graduates choose industry

by Sue Reid

Graduates are avoiding industry as a career, a research team from Oxford University has claimed. The team says that the latest figures on the destinations of Oxford students show that less than one in five first degree graduates enter industry or commerce.

The largest increase in recruitment has occurred in central and local government with the number of Oxford students choosing this career having tripled in the last six years. Accountancy and law have also become popular. More than 11 per cent of graduates selected these professions in 1974 compared with just seven per cent in 1969.

But the percentage of Oxford students entering industry has declined. Only 19 per cent of graduates chose this field in 1974, compared with 15 per cent in 1972 and 20 per cent in 1969.

Mr David Lethbridge, a fellow of the Oxford Centre for Management Studies, and Mr Robert Dunmore, assistant secretary for the appointments committee at the

university, who have published their findings in this month's edition of *The Director*, blame this situation on the differences between industry and the academic world.

The article says: "Industry is an unknown territory and therefore students' prejudices based on such things as the Lonrho affair, expense accounts, pollution, the rat race, possible redundancy at 40, misleading advertising, and the north of England complete with endlessly smoking factory chimneys." It adds that students have expressed doubts about the use of industry and the morality of private enterprise.

Mr Lethbridge and Mr Dunmore say graduates are often concerned by the stresses and strains and possible health hazards of a management career. They are uncertain whether the lifetime remuneration will equal that of a more secure job elsewhere with more reliable pension provisions.

A general ignorance about industry is also pinpointed by the two academics. They complain of a lack of knowledge among teachers and the public.

The article points out that ac-

ademic excellence alone is no qualification for top management but stresses that industry requires a proportion of the country's best and most able people. Few of these people could now escape the mill of higher education and therefore it was no graduates that industry should look.

The attractiveness of industry should be enhanced in spite of the lack of power in industry to modify widely held views, compared with that of teachers, politicians and media, said the research team. Image of industry needed improving possibly by encouraging more recruited graduates to talk to students.

Figures published in *The Director* on the destinations of all British university graduates in 1973 reveal that the appeal of industry and commerce is stagnant. Just 27 per cent of first degree graduates chose this field in 1969 compared with 28 per cent in 1973.

Similar trends are developing where in the world as regards industry, say the Oxford academics. Twenty years of research in the United States have shown a steadily downwards, most dramatically on the overall measure of motivation to manage.

News in brief

£27,000 regional library study

The British Library has awarded grants to Loughborough University and Leeds Polytechnic totalling £27,000 to examine library use in their respective regions.

The studies will investigate "failures" in supplying books and materials to readers—for instance, items that cannot be borrowed at all and are stocked only by the largest libraries, such as abstracting journals and expensive reference works.

Students badly housed

More students are being housed in low standard accommodation as the national demand for new and refurbished housing stock grows, Mr John Marshall, president of the National Union of Students (NUS), claimed at the polytechnic conference recently. Students did not seek better housing conditions than the rest of the community but needed dry, clean accommodation with study space.

Principal designate

Professor Arthur Johnston, of the University College of Wales, Aberystwyth, has been appointed principal designate of the college. He will be based at the Elizabeth Gaskell College and Manchester and Mather colleges of education. Professor Johnston currently holds the post of Rector of English at Aberystwyth.

Researchers researched

A team from Leicester University under Professor A. J. Meadows, of the department of astronomy, has received a grant of £5,400 from the British Library to examine articles about research that appear in learned journals.

Swansea judgment

An error in the transcript of the industrial tribunal's judgment in the case of Mr Michael Weston versus University College Swansea over alleged unfair dismissal (*THES* August 8) has been drawn to our attention.

The quote from sub paragraph four of paragraph six of the first schedule to the Trade Union and Labour Relations Act 1974 was incorrect. It read "fair" instead of "unfair".

SSRC appointments

In the profile (*THES*, July 25) of Dr Cyril Smith, new secretary of the Social Science Research Council, it should have been made clear that the secretary is appointed by the SSRC not by the Department

New courses help overseas

doctors speak English

by Frances Gibb

Lancaster University has designed a set of courses to help overseas doctors overcome language difficulties and communicate more easily with their patients.

The courses, designed by a team of English language specialists in the department of linguistics and modern English language, will be tried out this autumn by groups of 25 overseas doctors at four colleges of further education—Putney, Bournemouth, Nelson and Colne and Oxford. If successful, the teaching material and audio-visual aids will be made available on a national scale next year.

Mr Christopher Candlin, project director and a senior lecturer in the department, said: "We are hoping that those preparing for the General Medical Council tests in English language and clinical competence as well as overseas doctors already employed by the National Health Service will benefit considerably from the courses."

The General Medical Council, whose new examination for overseas doctors earlier this year showed a low rate of success in its results, said it was not in a position to comment on the suitability of one set of courses as opposed to others.

Dr A. F. Sayeed, chairman of the

Overseas Doctors' Association, welcomed the courses and said: "The ODA had been closely involved in developing them. The aim should not only help doctors to pass the GMC examinations but also help to improve communication between doctors and patients."

The ODA had been requesting that the GMC and Department of Health and Social Security organise this kind of course, he said. "The long term benefits to the National Health Service would make it a very good investment."

Mr Clive Bruton, one of the course designers, said: "We see the problems not being a question of English grammar or medical terminology but of intercultural aspects of linguistics, almost—between doctor and patient. Going through medical school does not prepare you for face-to-face contact with patients."

The courses are based on 18 months' research in 18 hospitals by Mr Bruton and Mr Jonathan Leuther, a research associate, on the way doctors communicate in clinical consultations in casualty departments.

The research was undertaken with the aid of a grant of £8,000 from the Nuffield Provincial Hospitals Trust.

Bodleian could be paralysed by jobs freeze, curators say

The effect on the Bodleian Library at the University of Oxford of frozen staff vacancies is already harsh and could be paralyzing, the curators warn in their annual report for 1973/74.

Most graduates members of the library staff are specialists whose duties cannot easily be passed on to others who in any case are already fully occupied, the report says.

"The library is a large administrative machine, of which some parts could easily be brought to a halt by the occurrence of vacancies which are random in their incidence."

Requests from readers for books were up 16 per cent on 1972/73 which, although not unwelcome, imposed a heavy burden on the library's depleted staff.

Government launch 'statistics for your pocket' campaign

Britain's balance of payments in deficit by £369m in 1974, credit by £460m in 1969 but by £1,000m in 1970, the annual report for 1973/74.

Such figures, which form a background to the country's present economic difficulties, are taken from *United Kingdom in Figures*, a pocket-sized card listing selected and important national statistics for the years 1951, 1969, 1973 and 1974.

It is part of the campaign by the Government to develop a higher level of statistical awareness in the population.

Records, for example, that in 1974 there were only 130,000 full-time students in higher education, compared with 150,000 in 1969, shows that 57.4 per cent of children who attend state secondary schools go to comprehensive schools while only 42.6 per cent go to grammar schools.

'Golds' rush could start on campus

by Frances Gibb

Centres of sporting excellence should be developed at universities and colleges to provide for the needs of gifted sportsmen and women, Mr Denis Howell, Minister of Sport, proposed last week.

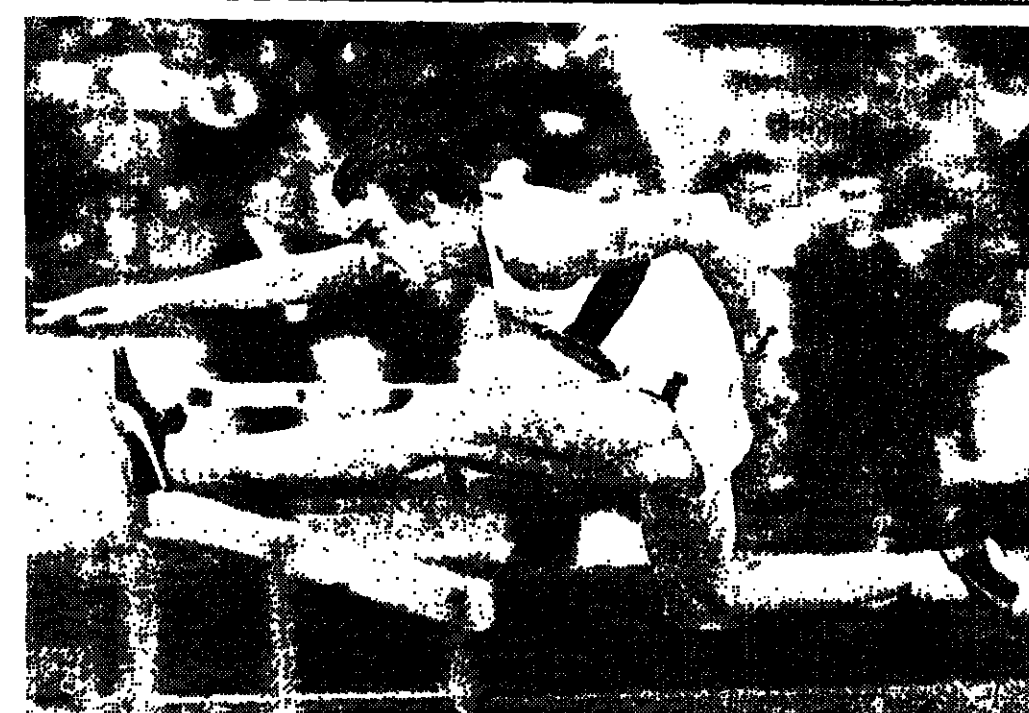
A working party of representatives from universities, polytechnics and colleges and national sports coaches has been set up, chaired by the minister. It will investigate which universities and colleges would be most suitable for development as centres based on departments of physical education.

Introducing the White Paper *Sport and Recreation* last week Mr Howell said: "Provisions for gifted sportsmen and sportswomen have been needed for a long time. There is no reason why Britain's sportsmen should continue to take on the world's sportsmen with one arm tied behind their backs. Society should not provide less for the development of those whose talents are sporting than for those whose talents are academic."

"Accordingly, the Government is looking into means of diverting resources to those who are gifted in sport," the White Paper says. A particular study is being made of the possibility of developing centres of sporting excellence at universities and other colleges which would also provide for the general educational needs of selected young athletes.

Universities and colleges had already shown "phenomenal interest" in the proposals, Mr Howell said. The Paper emphasizes that any proposals would have to be discussed with the institutions or other bodies, and points out that the Government does not interfere in matters affecting the admissions policies or curricula of educational institutions.

He envisaged 20 to 30 centres around the



Alan Pascoe: will the next generation of athletes all hold degrees?

country, with specialist facilities available at some universities, for instance, Birmingham. A spokesman from Birmingham University said: "We welcome the idea. Already we practise this to some extent and top athletes from Birmingham and the Midlands come here."

The centres would be used both by sportsmen and women and people living in the nearby towns. "It is wrong if good and expensive facilities are under-used in a period of financial restraint, in particular, it is important to ensure that the maximum use is made by the community of facilities already available," the White Paper says.

The sportsmen would live in the centres in

order to make full use of their facilities, Mr Howell said. Their living expenses could be paid for by bursaries from commercial firms. The bursary scheme might be off the ground by the end of the year, he said.

The French Government is currently considering a Bill which aims at encouraging more young people to do sport and help improve France's poor record in international sporting events. The Bill advocates that a two-year diploma course in physical education and sport be offered at selected universities. A third of the course would be spent on sport. Modern languages would be a compulsory element (*THES*, May 30).

Bath v-c to retire early

by Alan Cane

Dr Leonard Rotherham, vice-chancellor of Bath University since 1965, has decided to retire at the end of next year, three years earlier than planned.

In a letter to Dr E. L. Herbert, chairman of the university council, Dr Rotherham explained: "There is now bound to be a period of consolidation of the plans which have already been made, and it seems a good opportunity for my successor to be appointed, so that he may look forward and plan the period of future growth which may well occur in the 1980s."

Dr Rotherham, who will be 62 at the end of the month, said this week that he was sorry to be leaving but as the development of the university would be comparatively slow in the next few years—especially due to a lack of money for new buildings—it was a good opportunity to retire.

He dismissed suggestions that his retirement had been hastened by political disillusionment, although he is disappointed that the university has not developed as rapidly as he had hoped.

He said: "I take no pride in having the lowest unit cost in the country: quite the reverse." He wanted the university to operate efficiently, economically but using adequate finance to achieve its objectives. "We are not yet competitive with the older universities," he argued, going on to emphasize that Bath was not trying to compete directly with orthodox universities.

Dr Rotherham, a physicist, worked in industry for many years and was head of research for the Electricity Supply Industry and Electricity Council before his appointment at Bath.

Asked what he considered to have been his achievements at Bath, Dr Rotherham pointed to the support from his academic and administrative staff in recent years when financial stringency has meant increased workloads. He said: "I doubt whether any vice-chancellor in Britain has had more positive support from his staff than I have. There is a very fine corporate spirit here."

The university has a year to find a successor although Dr Rotherham has made it clear he will vary the duties of his departure to suit the university.

Although Bath has had very little to do with comprehensive schools, it has been the chief factor in the declining popularity of the job of

OU changing to colour

A grant of £600,000 has been allocated to the Open University to enable it to convert its television transmission from black and white to colour, according to the annual report of the Department of Education and Science for 1974 published last week.

The conversion, which was completed at the OU studios at Alexandra Palace in April, means that all OU programmes will eventually be transmitted in colour, although at present many programmes made in black and white before April are still in use. About 55 per cent of OU students have colour television, it is estimated.

Mr Peter Dunkley, editor of the OU/BBC arts broadcasting, said: "The equipment was ten years old, and we had to decide whether, in view of the proposed move of the studios to Milton Keynes, to carry on with the monochrome equipment or to colourize this year and take the new equipment with us."

A strong argument for the change is the marketing potential of OU programmes. Mr Dunkley said: "No one wants to buy black and white television programmes. We have made the OU films in colour since 1971 because no educational institution wants to show black and white films."

Reasons for the change from the technical point of view were put by Mr Philip Blinco, assistant senior engineer for the OU/BBC programmes. As engineers, we wanted to work in a professional medium, and one which is recognized throughout the world, and that is colour television," he said.

Monochrome equipment was becoming less available and more expensive, Mr Dunkley added. In addition, the average life of a television camera was only about 10 years.

The grant covered the cost of a new outside broadcast unit (which was converted to colour in January) and the new equipment in the studios. This included eight colour cameras, lights, control and other units, conversion of a telecine machine and video tape machines, and purchase of a colour television monitor.

Not all the grant was used, Mr Dunkley pointed out. "We converted for the OU quite cheaply, because we used new British equipment, which is considerably cheaper."

Only £150,000 will buy one top engineering department

by Brian MacArthur

Staff at one of Britain's scientific centres of excellence have put themselves up for sale—and only a few of them are joking.

They are from the Control Systems Centre at the University of Manchester-Institute of Science and Technology, one of the four centres of excellence in control systems, which are specially supported by the Science Research Council. (The others are Cambridge, Imperial College, London, and a consortium of Sussex, Warwick and University College, Bangor.)

Senior Lecturer Dr G. C. Barney sent the following letter last week to *THE THES*:

"My colleagues and I are very concerned over the serious state of university finance, both salaries and resources. To highlight this deterioration I enclose a letter, which you might care to publish on behalf of my colleagues and me. It is in the form of an advertisement to give a tragedy-comedy note."

The "advertisement" is published below.

Dr Barney said last week: "If an attractive offer was made, say from Australia or New Zealand, we might very well say 'Yes, we will go'. We work 60 hours a week, take three or four weeks holiday but now we are beginning to say: 'Why not get out and enjoy ourselves?'"

He added that the salaries of professional chartered engineers had traditionally been 10 per cent lower than in industry or government establishments but many had chosen university work because of the lack of restrictions and the opportunity for teaching and research.

Yet now that the Government was cutting back budgets, staff at the UMIST were being replaced on the basis of appointing only one for every three who left.

There were 32 students on the control systems course taught by the Controls System Centre. Some 40 per cent were British and the others mainly from countries in the Middle East, South America and Greece.

FOR SALE

Offers are invited for

A DEPARTMENT OF CONTROL ENGINEERING

comprising one distinguished Professor 21 Senior Lecturers and 72 Lecturers with wide experience and competent skills in all branches of control theory applications and practice. Areas of principal interest: classical, multi-variable, optimal, adaptive, stochastic and computer control. The group would require suitable office, laboratory and teaching accommodation, together with support staff and an interactive computer facility.

Applications should come from Governments and Universities who are fully committed to the worth of university research and teaching and a respect for the professional engineer in society. An acceptable country would be a democracy having an equitable climate with pleasant and hardworking people.

USS or similar superannuation scheme should be available. Anticipated stipends, at present exchange rates, would be:

Professor	+£15,000 - +£20,000
Senior Lecturer	+£12,500 - +£16,000
Lecturer	+£8,000 - +£12,000

12 copies of all applications should be submitted by 31st August, 1975, and appointments would commence 1st October, 1975.

Yours faithfully,
Box No. 21/13/19/20.

Vaizey to head Australian university

Professor John Vaizey of Brunel University is to leave Britain to become vice-chancellor of Monash University in Australia.

Professor Vaizey, 45, is head of the school of social sciences at Brunel and well known as a broadcaster, novelist and columnist. He was one of the founders of the economics of education as an area of serious study in Britain with the publication of his book *The Economics of Education* in 1962.

Monash University, in Melbourne, was founded in 1924 and has nearly 14,000 students with strong schools of medicine, law, engineering and education. Professor Vaizey, who succeeds Dr J. A. L. Matheson, will take up his post in 1976.

Professor Vaizey, a regular contributor to *THE THES*, has been a firm supporter of the continuing expansion of higher education in Britain. A recent interest of his has been inequality in society; so he is now working on a major study after last year chairing a successful series of programmes on BBC Radio Three entitled "What-ever happened to equality?"

Professor Jack Lewis, professor of chemistry at Cambridge University, has been appointed the first warden of Robinson College, which is being founded by a £10m gift from Mr David Robinson, a Newmarket racehorse owner.

Professor Lewis said this week that he was excited at the prospect of being in charge of the first co-educational college at Cambridge and hoped it would become one of the great Cambridge colleges. He has held the chair of chemistry at Cambridge since 1970.

Work on the new college buildings will start during the first half of 1977 and the first undergraduates will take up residence in October 1979. Some graduate students may be admitted before that date.

Scholars welcome library decision

by David Walker

The new reference division of the British Library is to be built adjacent to St Pancras Station in London, Mr Hugh Jenkins, Minister for the area, announced last week. An architect will soon be asked by the Department of the Environment to begin design studies for the buildings which will house the collection of books and manuscripts at present in the former British Museum Library in Bloomsbury and the first phase completed by 1985.

Scholars this week welcomed the decision which would guarantee the British Library's reference collections being gathered together on one site, with reservations about the separation of books in the library and the collection of exhibits in the British Museum.

Professor H. S. Smith, a leading Egyptologist of University College, London, said: "What most of us feel is relief that the site has finally been settled in London and that there will be adequate premises for 'stocks of books' in store to make them more available than at present."

The Government announced that in conjunction with the British Library Board it was satisfied the site in Somers Town off Euston Road would provide for the library's building needs. Building would start in 1979-80 if economic conditions permitted, it said.

The decision represents something of a volte face for Lord Eccles, chairman of the British Library Board, who six months ago complained that the site would mean books would have to be "carried somewhere in North London". In fact the site is barely a mile from the British Museum.

Scholars said that delays in getting books were becoming so great at the library that the previously deplored separation of books and museum exhibits would have less importance.

A Tudor historian said what mattered to him more was the fact that the collection of documents in the Public Records Office was being dispersed.

When the new library is fully completed, it will house all the collections of the British Library.

The Gaelic songs might have been Japanese laments

from Ronald Faux, Scottish Correspondent, "The Times"

Seven hundred undergraduates from two Japanese universities are now in Scotland thoroughly immersed in Scottish culture, life, history and politics. They have come from Tohoku University, a new state university near Tokyo, and Maito Gakuin, a private university partly founded by the Scottish Presbyterian Church near Tokyo.

A summer school centred on Edinburgh University has been organized for them by the World Goodwill Mission from Asia which has promoted similar visits in recent years but never before on such a scale. The object of the school is to administer what one professor described as a "cultural shock" in the interests of international understanding.

Educationally, it allows Japanese students to experience university education in a different country and has cost them £900 each, all of which has been found by the student or his parents. The Japanese, it seems, do not go in for state help in such projects. The idea appears to be that what you pay for you appreciate, which may have some sound Oriental common sense about it, one of the Edinburgh lecturers observed.

The university has arranged lectures on Scottish music, art, education, history and on the modern political and economic scene. The party is accompanied by its own guides and the university provided

interpreters who struggled to explain such esoteric subjects as the pibroch, and the subtleties of Scottish verse including the inscrutable qualities of William McGonagall.

After two weeks of lecture sessions, contrasting visits to the Highlands and Glasgow and evenings of Japanese and Scottish culture the party is to make a swift European tour before taking their cultural shock and whirlwind of impressions back to Japan.

The World Goodwill Mission from Asia was founded in response to the UN Congress of 1967 which considered international understanding. The visits to Scotland began with small groups of students and have built up steadily the dimensions of a cultural airlift.

"Edinburgh is excellent as a centre because there is so much concentrated here which is readily accessible. It is a capital city with a great air of history about it and we have the academic backdrop of the university. Organizing this in London would be much more difficult and costly," Mr Tim Steward, director of studies, said. Staff from local museums and commercial organizations bring their own expertise to the summer school and the organizers claim that the operation is the largest of its kind in Britain.

The Japanese families, it seems, regard such international activity as a good investment in their children. The average middle class Japanese family was able and prepared to pay out £900.



When in Scotland... A Japanese student explores the possibilities of a truly international instrument.

First reactions from the students centred upon the physical differences between Japan and Scotland. A group admiring Holyrood Park wondered at the survival of so much green space so close to the heart of a city. Someone explained that the largest of its kind in Britain, Holyrood Park was close indeed to the heart of Edinburgh and for that reason would never be built upon.

In Japan, the students replied, there was not the room to tolerate

such sentiments. There were many people and little habitable space, indeed about twice the population of the British Isles was contained on about the same area of land. One student flexed his English. "Naturally, therefore, we enjoy so much green greatly. Other students preferred not to speak English and a professor explained that unless a Japanese felt absolutely confident that his command of a language was fluent he would

prefer to remain silent or rely on an interpreter. They would never adopt the British technique of addressing foreigners slowly and loudly in their own language in the hope of being understood.

But there were some likeminded which could be detected between Japan and Scotland. Were not the Scottish clans with their history of warring lords similar to the Samurai of Japan? Were not Scotland a multi-ethnic society in the same way that Japan set the pace even more firmly and aggressively at the heart of the household?

A Japanese girl, the most glib and feminine of feminists, remained that Japanese times were changing. Certainly until they became married Japanese girls were rejecting the old submissive standards and if the rapidly rising divorce rate was any guide then emancipation was also invading Japanese domestic life.

Their professor agreed to add that he thought humility was a quality which the Scots and the Japanese had in common. The Scottish student agreed, except with the Japanese humility was a social face concealing a rough, confident nature. With too many Scots their humility ran down to the economic roots.

So discussion went on and the were exchanged. At the time the Japanese organized a level of martial arts and dance, while the Japanese girl, while kimono clad girls, strange tasting tea with elaborate ceremony.

The Scots replied with panto dances, haggis and a blast of pipe music. There were also songs which to the untrained ear might have been Japanese laments. One student remarked "Why do few Scottish people speak the English and a professor explained that unless a Japanese felt absolutely confident that his command of a language was fluent he would

Don's diary

Outside interest

This is the time of the year when I have not only been trying to cope with the examination papers of my own students but have been serving as external examiner. The external examiner system is deeply rooted in Britain and in many other countries which have followed our university system. As one who is on both the receiving and giving end, I believe that it is a good system and does much to maintain standards.

The mere fact that students are to be subjected to the scrutiny of an outsider should ensure that the examinations are properly set up and that the grading of the degrees awarded is roughly similar to that in other universities with comparable courses.

To welcome an outsider who can, and does, interview your students and then criticize the course content and the way it has been taught demands a certain degree of self confidence. It says much for the universality of such a system that in Ghana, Nigeria and the Sudan that they are enthusiastic advocates of the external examiner system. I believe that the Arab countries also follow suit.

The first job of the external is to approve the questions. Usually this is a mere formality but, if I sense that even had I been properly educated I would still not have known what the examiner was asking, I usually speak up on behalf of the students. Sometimes my criticisms are accepted but quite often they are rejected.

The usual reason for rejection is "the students will know what the question means" which is another way of saying that I am asking them to regurgitate a particular lecture. This may be popular with both the students and the lecturer but it does not accord with my view of an examination.

There is, I think, an increasing problem of setting examination papers which has come with the democratization of our universities. My view is that since the head of department has the responsibility for standards he should have the last word and that all members of staff should not carry an equal vote. It seems to me that a large proportion of department on the contents of a paper and he agrees with my criticisms but says he was outvoted.

Talking medicine

An external in biochemistry has the pleasure of not only examining science students but also medical students. Most medicals are still interviewed and the sessions are usually held with a pair of examiners. Sometimes this gives me the opportunity of learning from a biochemical colleague and sometimes from a physiologist which is a real bonus, for biochemists and physiologists do not normally fraternize.

Sometimes the routine is rather quaint with little bells being rung to announce the start, one minute to go and the end. I never take any notice of such signalling, probably because of all the bells I suffered at church in my youth.

Most of the medicals who are interviewed by the external are in the marginal category, which means they have not done well in the written paper but may be impressed that a pass may be recommended. In other cases they may be in for distinction or honours. It is surprising how seldom the two examiners disagree.

I cannot pretend that interviewing medicals is an ideal way of spending one's time but there are some bonuses. One secret I can divulge is that the Irish are the only students who occasionally ask whether they have passed or failed. The English, I suppose, have learnt not to ask silly questions.

It is comparatively rare for a student these days to be distraught, which is a change from the past; in fact the really bad students are usually very cheerful. I had one extremely good student who had previously given up the medical course and was a living selling trinkets in Africa. He had made so much money that he decided to have another go at medicine. The viva consisted of me

Outside interest

of the Africans by selling them trinkets. In the case of science students the job is rather different. It is easier if the course being examined is close to that of one's own university. One at least has an idea of a reasonable standard. When a degree in biology is being offered and biochemistry only forms a small part of it, standards are more difficult to gauge. Here, too, there are bonuses for one may even get an inkling of what one is talking about.

The major problem with scientists is whether they should be graded II(i) or II(ii), which these days is very important, because it is difficult for a graduate to be taken on for a PhD if he does not do better than a II(ii). The rule one works to is that the marks have shown clearly a certain grade, the student has a chance in the viva to raise the grade; if he fails to sparkle the marks hold.

Unlike the medicals the interviews are not held in pairs. Some times one is warned that the student is excessively nervous and anything could happen but it very seldom does. It is fun trying to judge whether someone is worth a first. Again it is not too difficult and an opportunity to talk to a really bright student is a heartening experience especially if the student is a beautiful lass.

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the Federation of European Biochemical Societies. The latter consisted of five days of symposia, poster sessions and exhibitions in the International Centre in Paris attended by about 2,500 people. A talking point at these meetings is the poster sessions which have replaced the short 10 minute papers. The presenter is allocated a board 2m high by 1m wide on which he can mount his poster. You have to stand by the poster for an hour minimum but it is on display for about four hours.

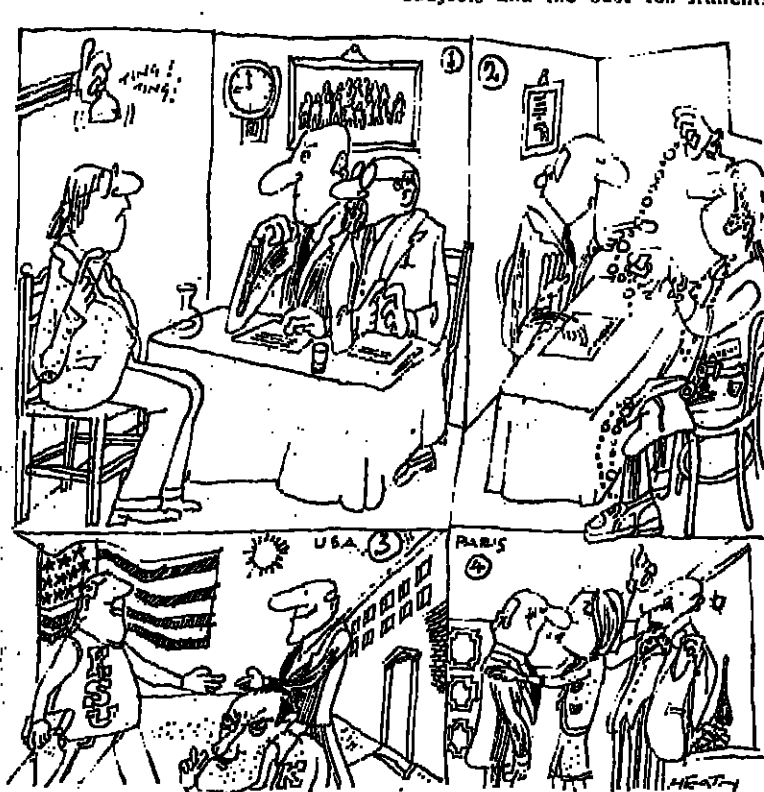
I found myself glued to my poster from 1.15 to 6 pm. It was a really heartening experience being able to meet so many people not only from all over Europe but from as far away as Taiwan.

There is no doubt that the poster first started by the Biochemical Society in this country, has caught on. It is a big thing and does have the advantage of introducing people at a personal level, but there is a flexibility of language and, should anyone fail to turn up, the programme is not disrupted. It is less embarrassing, too, if for any reason the work on display does not attract much attention.

Savoir faire

One afternoon I visited the Cuchin Medical School and met one of the three professors of biochemistry. The school is one of three in the Faculty of Medicine in the Clinique University of Paris.

Cuchin Medical School admits 800 students per year. At the end of the first session the students take written examinations in the basic sciences subjects and the best 185 students



Ideal state

Within a few hours of completing the examinations this year I arrived at Kansas State University, Manhattan, for a conference. The campus was immaculate and the welcome by ten students is a truly delightful place.

The refectory served excellent food under first-rate conditions at below UK prices. I asked a student how it was that the campus was in such excellent order. He did not really know the answer but explained that the students at KSU were noted for their good behaviour. In fact in his day President Nixon had remarked that it was the only campus in the USA where he felt safe to speak. Even the students of KSU found this a dubious compliment.

One evening I visited the home of a member of staff of the department of biochemistry and learnt what an idyllic existence they lived. On the two acre plot they could keep goats to provide the family with milk, chickens for eggs and cultivate enough land for all their vegetables.

I also visited the swimming bath at the university where there was an olympic size pool with underwater music. No one could quite exploit the advantage of this brilliant technique.

My most recent visit has been to Paris for 10 days to attend the meetings of the Council of the International Union of Pure and Applied Chemistry.

are allowed to enter the second year. The entry to the second year is based in the availability of beds in the teaching hospital, for very few students fail in the later years of the six years course work.

The competition for entry to medicine can, therefore, be said to be delayed a year compared with Britain. It also, of course, makes for a pretty competitive first year for the medical students in France.

I had the opportunity of comparing the staffing structure of the medical schools in France and Britain. This is a complex subject but in practice the greatest difference appears to be the lack of mobility of the professors in France. Thus, I understand it is very unusual for a professor to be appointed in a medical school if he has not been a student in the same school.

After the congress was over at about 7 pm on the Friday night, I checked to be present when its president said goodbye to the elegant and charming lady who had forsaken her bench for many months to act as his secretary. After they had shaken hands I felt bound to remark to the president that I would have expected a kiss on such an occasion. Much to my delight he recalled the lady explained my views and excused my suggestion. So the British still have a little influence over the French.

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Crowther-Hunt and the future confident



Kenneth Minogue

So far as anyone interested in higher education is concerned, a new character has suddenly appeared in the newspaper vaudeville alongside General Amin, Henry Kissinger, the Black Panther and similar celebrities. I refer, of course, to Lord Crowther-Hunt who, week by week (it often seems day by day, or even hour by hour), delivers educational policy statements.

Wherever two or three are gathered together in the name of education, they had better watch out. If they are not careful, Lord Crowther-Hunt will pop up among them and deliver another policy statement.

And such statements! They are couched in the grisly jargon of educational administration, a language only too familiar to regular readers of the front half of *The Times*. And they are delivered with a verve and enthusiasm possible only to someone newly arrived at the dizzy heights of power.

Who else these days can utter phrases like "getting our priorities right" without succumbing to helpless laughter? Nor would such laughter be merely a frivolous response to a tediousness and cliché. It would recognize the sheer illogicality of imagining that priorities can be not only approved or disapproved, wise or foolish etc, but also right.

Can one imagine any sophisticated person talking about the "needs of society" remembering as one must that "society" means here the heterogeneous and often conflicting 55 million inhabitants of the United Kingdom? Well, one had better imagine it, because that is just what Lord Crowther-Hunt has been doing.

Sometimes he varies the tune by talking of "national needs" which must be irritating to the Welsh and Scottish nationalists who (rightly) do not think that Britain is a single nation. But "national need" has always had a nicer sound than "what the state demands".

Do university teachers, having finished a string of tutorials, a demonstration, or a lecture, think to themselves: I have just made a contribution to the national life? This, apparently, is what Lord Crowther-Hunt thinks they are doing. He has not yet told one of these conferences that God is love, or that gentlemen must adjust their dress before leaving, but he will might.

There is, no doubt, a sad inevitability about the transposition of the subtleties of education into the humdrum of platform oratory. Higher education no longer prospers in benign neglect, but has become a hot national issue. That means that it must be discussed partly in the vocabulary of policy administration, and partly in a language originally pioneered by educational rationalists in the seventeenth century.

This is a vocabulary that was taken up with enthusiasm by the enlightened despots of the eighteenth century and passed on to their natural heirs, the ideological demagogues of the nineteenth and twentieth centuries. The enlightened despots justified their hunger for power by announcing themselves to be not (what they actually were) but the servants of their peoples.

Ever since, the power hungry have learned to speak in the language of service, of caring, of responding to needs. Very amiable masters, we have had to learn to live with, but more tellingly, they want to plan us, and to give higher education is now in their octopoid grip, one had better pay some attention both to their projects and to the language in which

For the last decade and a half higher education has been conducted in the midst of a swirling, phantasmagoria of statistics purporting to be such things as the number of student places in 1970, or 1981, or 2001; or percentage increases of capital expenditure devoted to education over time.

Some people have so far fallen into the habit of taking these figures seriously that they not only take as meaningful the already shaky statistics of past events, but even operate a new tense for the grammar of politics—the future confident—in which they state as if factual the projections or extrapolations produced by government departments. The future confident does not, however, lead to the future perfect.

There is only one thing certain about these figures: that they will all be wrong. Demographers are like meteorologists: do not put much trust in them if you intend a picnic.

Even if experts did get their predictions right, prospects would hardly be improved, for the British government has an unrivalled record for spending vast quantities of money on misconceived projects. By a fascinating irony, the very issue of *The Observer* containing one of Lord Crowther-Hunt's more stirring vocations of the national need also carried news of the failure of advanced gas-cooled reactors at a cost of £1,000 million.

Over a wide field of planning, British government has a flawed record, and it is now putting this experience to excellent use, since roughly the same people are now planning even bigger and better fiascos.

What is objectionable is not that mistakes have been made, but that those who have so frequently blundered retain so undiminished an appetite for taking decisions out of the hands of individuals and universities in order to vest it in government committees.

Has the catastrophe of violent expansion followed by violent contraction of higher education in Great Britain produced the slightest suspicion in the Department of Education and Science that it might be better to leave well alone? Has it indeed? Harken again to Lord Crowther-Hunt.

Is laissez faire, educational provision in my view as unsatisfactory today as was pure laissez faire economics in its nineteenth century heyday. As we all know, laissez faire capitalism never provided the hospitals, the social services, or the schools system the country needed.

This comment may teach us, if the history of Victorian countries has not already done so, that there is no situation so unpleasant that it cannot be made tolerable by contrast with some legend of a bad past. It is no doubt true that, having hindsight and greater resources, we do many things differently from our nineteenth century predecessors.

But they did establish, for better or worse, compulsory education, and a network of hospitals up and down the land.

Further, any inhibitions from which they may have suffered are not attributable to "laissez-faire" capitalism.

The point of this excursion into legend is no doubt to persuade us that without avuncular chaps like Lord Crowther-Hunt taking our money away from us and building universities and polytechnics for us, we should all be helpless and lacking in the most ordinary provision; mere stringless puppets.

The main objection to the whole tone of educational planning is that it treats people as robots to be manipulated and provided for. In this world, people don't choose and respond. They have decision making processes to be managed. Observe again the words of Lord Crowther-Hunt:

"When we know the main elements in their (16-to-18-year-olds) decision making process, we shall then know how best we might advise them and encourage them to match their talents to the nation's needs."

If they have any sense, these much abused young persons will go on to higher education and study whatever interests them. They will not bother for a moment with what the DES currently considers to be the "national needs".

One good reason for such a response would be the fact that by the time they graduate, some other notion of the nation's need will be in vogue. But an even better reason is that, to a large extent, the preferences of people have been

IBIS is more than a carrier pigeon

by Judith Grundy

When only 15 per cent of all new books are reviewed, in developments and journals in the publishing area forced to look for other methods of publicizing their wares. Advertising in the same journals is one way. IBIS is another.

International Book Information Service aims to provide a comprehensive academic service with worldwide coverage. The publisher can channel academic book promotion material through IBIS which sees that it goes only to those directly interested; the academic, therefore, receives only material that is relevant to his interests.

IBIS was formed in 1971, from a merger between University Mailing Service and the mailing service of the Book Development Council. University Mailing Service had been formed in 1967 when four publishing houses—University Press, Cambridge University Press, Associated Book Publishers, and Longman—joined forces to build up a mailing list of academics and libraries in the United Kingdom.

The Book Development Council, which was designed to promote the sale of British books overseas, had at the same time set up a mailing list service for overseas academics and libraries.

IBIS has on file over 350,000 addresses of libraries and staff at universities and colleges in the United Kingdom and overseas and claims a 75-80 per cent response from the questionnaires they send out to academics each year.

When dealing with such large numbers of people, the information has to be stored on a computer. IBIS, who do not have their own computer, use the services of the IBM 360/50 computer which belongs to Book Centre, a company based in north London.

Each individual's details are stored on file and coded in four different ways, indicating his part of the world, occupation subject and fringe interests.

Each year the company updates files, checking manually the list of last year's staff, in any one institution against the list for the coming year. Any academics who have moved are deleted from the file and address and status changes are made at this stage, as far as possible.

All new information is added to the master file which has a complete list of addresses but may not have up-to-date information about the individual. A questionnaire is sent to each person telling them what information IBIS has on file.

about them and giving the opportunity to delete inaccuracies and expand on research interests, for example.

The subject coverage is very extensive. The general heading history has 83 separate sub-divisions. Included under the sub-heading "other branches of history" are diplomatic history, heraldry and genealogy, historiography, history of science, contemporary, demographic and urban history. Law has 45 sub-divisions and under the general heading "African languages and literature" the specialist in Creole, Bantu, Amharic and Swahili is catered for.

IBIS is in a monopoly position in the United Kingdom, being the only company that maintains a list of named academics on such a scale. But, as a spokesman for Edward Arnold pointed out, it is not often that one wants to mail individuals—heads of department or librarians can be just as effective, so the specialist lists are of most use.

On the other hand, Routledge and Kegan Paul like to address a named individual as they do one very big mailing shot each year when they try to reach every single academic in the country. A questionnaire is sent to each person telling them what information IBIS has on file.

For Macmillan, mailing is the most important item in their publicity budget for academic books, despite the fact that they claim that all their academic publications merit a review or mention somewhere. Mailings for them are to give as much information and advance warning as possible about forthcoming books.

But they are now trying to compile their own lists for the United Kingdom and are finding that sources for overseas since academic book promotion budgets are small and IBIS a little expensive. They too use the company for specialized mailings only.

In the days before IBIS each of the major academic publishing houses compiled and maintained their own mailing lists. University Mailing Service was an attempt to combine the resources of four major publishers basically to reduce costs. This led to IBIS.

When times are hard and economic stringency is the order of the day, advertising is one of the first areas of company spending that has to be cut. For companies like IBIS to survive, they need to guarantee accuracy and reliability from a service which the publisher has absolutely no way of monitoring per-

Iconoclast keeps on the move

After five years as an assistant director general of UNESCO Professor Richard Hogart has just taken up a six month Leverhulme fellowship at Sussex University to write the organization's history. He becomes warden of Goldsmiths' College, London in January.

Although he has moved into administrative work, the ideas contained in *The Uses of Literacy*, which made his reputation in the 1960s are still having repercussions on the academic scene. The book questioned conventional definitions of culture by treating "working class" culture on a par with established literary works going beyond textual criticism to an anthropological look at everyday life.

Professor Hogart has not been directly involved with these issues since he went to UNESCO. His career has been remarkably successful. Starting from what he describes as a "copper bottomed" working-class family, he went to Leeds Grammar School, from which he won a senior city scholarship to Leeds University.

He later won a two-year post-graduate scholarship and planned to go to Cambridge, but it was 1939 and he was called up for military service. His professor persuaded the army to delay his call up for a few months and so he stayed at Leeds to complete his MA in nine months.

He did not get out of the army until 1946. Then he applied for jobs in university adult education and English departments.

The job he got was in the Hull University department of adult education, where he stayed for three years. After the war he set to work on a book on W. H. Auden, which was published in 1951.

"It was a work of love," he says. "I started as an essay, but it grew into a 40,000 words to Chatto & Windus, the publishers. Cecil Day Lewis sent a letter back saying that it was too short for a book and could I add 20,000 to 30,000 words."

That was in the spring. By the summer he was 80,000 words long. It reminds me how much energy one had then."

His next work, *The Uses of Literacy*, appeared in 1957, but this time it had taken him four to five years to write. He had trouble getting it published. Chatto's lawyer said that it was one of the most dangerous

Professor Richard Hogart

that the remarks about popular fiction could cost £40,000 in damages, and more if the company sued. In the end Professor Hogart had to invent quotes from Imaginist books.

Afterwards, the book contributed to the emergence of a new type of degree course in mass media, popular culture, marrying a social and literary approach.

The Uses of Literacy appeared before the post-war revolution of the 1960s so that the "low" culture described in his book is different from what many students would be interested in today. The book was in fact quite hostile to commercial influences which were some of the traditions described in it.

Professor Hogart acknowledges that his grammar school tried to develop some undesirable attitudes. For instance, that middle class speech was the norm, but says that is not what grammar school is at its best taught him.

While he was still a lecturer he served on two government committees, which reported in the early 1960s. They were the Alton Committee on the future of universities, and the Pilkington Committee on broadcasting. The Pilkington report, which criticized independent television and recommended the BBC should develop a second channel, had in fact been very much shaped by him.

He became professor of English at Birmingham in 1962, having spent a short spell lecturing in the University of Leicester. He believed it was important to develop his approach in a traditional redbrick university, but his impact has in fact been at the cutting edge. At Birmingham, his work has been at the cutting edge rather than in the English department.

Since *The Uses of Literacy* he has published while except the *Uses of Literacy* he has also published a book on the history of the English language, which has also been given up teaching which is his chief research. He looks forward to Goldsmiths' College because work is so varied.

My most recent visit has been to Paris for 10 days to attend the meetings of the Council of the International Union of Pure and Applied Chemistry.

One evening I visited the home of a member of staff of the department of biochemistry and learnt what an idyllic existence they lived. On the two acre plot they could keep goats to provide the family with milk, chickens for eggs and cultivate enough land for all their vegetables.

STUDENTS!

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Why all is not well with the Dip HE

One might be forgiven, from a cursory understanding gleaned only from the educational press, for believing that all is well with the new Diploma of Higher Education. However, DipHE mythology is ripe for exploding.

The number of institutions offering DipHE programmes from this autumn—if one accepts the figures quoted in a *THES* article on July 18—should be seven. It should follow then that in the summer of 1977 students of seven different institutions could emerge into the world with the letters Dip HE after their name. This is not the case. In 1977 students from at least 20 institutions in this country could be awarded the DipHE.

Where the calculations have gone wrong can be seen in the title to the article, "How to keep your options open and still find a quick way out". There is a good knock-down description of DipHE if ever there was one.

It highlights what has always been a major preoccupation with those of us involved in designing DipHE programmes, namely how do you achieve transferability to degree courses without loss of time from a terminal qualifications in its own right?

The five new DipHE courses mentioned in the article have struggled with this seeming paradox and achieved some kind of satisfactory compromise at least in the eyes of the Council for National Academic Awards.

On the other hand it should also be remembered that there are 13 colleges of education which, through six different universities, will be offering to students who successfully complete the second year of their Bachelor of Education studies in 1977 the chance to obtain a Diploma of Higher Education.

All six universities seem prepared to give such qualification only as a leaving certificate to those students who decide not to continue their studies for the BEd degree. Thus none of the universities seems prepared to countenance a student arriving at the end of three years of study with two qualifications, a DipHE and a BEd.

Similarly none of the 13 colleges, with one possible exception, seems to consider the DipHE as anything other than the first two years of a BEd. This latter point has the effect of ensuring that only those students who initially enrol on a BEd course can, at the end of two years, achieve a DipHE.

This very effectively demonstrates diversification. The new qualification as offered by these 13 colleges in 1977 will have no transferability of credit whatsoever, not even inside the parent universities.

Does it really say at this late stage in the saga of the DipHE that cyclical curricula as a concept is no more necessarily related to teacher education than it is to pig-farming? From the behaviour of the six universities, clearly it does.

It is of the essence of a DipHE course as a first cycle that it should lead to opportunities for more than one type of post-diploma course, so as to provide students with the possibility of a change of direction.

That the 13 colleges to be offered in the university sector from this summer would, without exception, fail to meet this requirement is, no more than a symptom of the complete lack of understanding demonstrated by the universities as to the nature of a DipHE programme.

It is also a very real threat to the credibility of the new diploma as a genuine addition to the spectrum of courses currently available.

It is now the case that under Department of Education and Science regulations, a DipHE course submission should indicate what opportunities exist for further study to degree level having regard to courses available in other institutions" (DES Circular 6/74).

The six universities involved in validating DipHEs do not seem to even recognize the existence of each other's schemes in terms of some reciprocity at degree level, let alone the kinds of interchange envisaged by the recent creation of the Association of Colleges Implementing DipHEs.

William Johnston

Two views of financing university halls of residence

Will reality jolt our romantic glow?

This is not a further contribution to the spate of articles advertising the glories of university vacation accommodation, in the hope that our academic colleagues and the rest of the world will keep us going, but a mild protest at the bland ignoring of the economic realities of this scene which most of these articles display.

The primary function of a university hall (using that term to mean any university residential establishment which includes catering) is to provide accommodation for students for 60 per cent of the year, with services to meet their needs, at the lowest possible cost. The other function is to provide, at a considerably higher fee, a more extensive and polished service for delegates to conferences and courses.

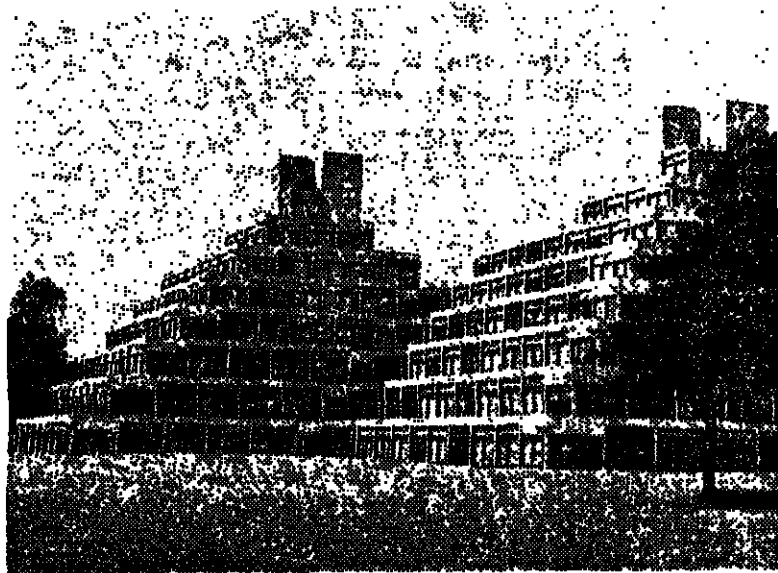
The problem is that, with costs increasing as they are and students' grants and conference funds dropping away with inflation, these two functions are becoming incompatible; and yet the income from each is still essential to the other. Some how, we have to reconcile them again, and this will require more than the pervasion of newspaper articles with a romantic glow.

It has long been clear that the balance of a hall's budget does not depend simply on the size of its conference income, but on the relation between its conference income per resident place and its cost of salaries and wages per resident per term.

In other words, a hall with low staff costs in term will run into the red if its establishment is insufficient for it to cope with the conference trade it needs; and with a big conference income will do so if, in order to get that trade, it has to carry too many staff for its term budget. The present economic crisis has upset this balance, and a potential deficit can no longer be checked by simple juggling of wages against expected conference income.

A hall now has to know precisely where a deficit is coming from, how far students are paying for what they get, how profitable a conference trade is, and how far either is paying for the other. If a deficit with one university can only help with costs which neither can be expected to support.

In analysing a hall's budget, the costs must be attributed to the sources of income to which they relate. Most are easy to divide up from invoices, stock-taking, meter readings and so on, but some are critical. Those to be set against



A residential block at East Anglia: how to reconcile two functions?

term fees are the costs directly involved in providing for students' needs; and this is the first controversy, since one man's needs are another's wants and the third's luxuries.

It is hardly unreasonable however to define this as what the hall students are supposed to have assessed within their fees" because no one can be said to need something for which he or she is not prepared to pay, given the basic income with which to do so.

The salaries and wages are those of the minimum staff required to meet those needs (the "student establishment") for the weeks of terms and the minimum vacation weeks of annual cleaning and nothing more. The cost of maintenance is that required to provide decent living conditions and to prevent undue dilapidation, and nothing more.

The costs to be set against conference income are those directly incurred during periods of conference activity, plus those involved in providing the higher standard of surroundings and service for which the members are paying.

Thus, the salaries and wages are those of the "student establishment" for the weeks concerned, plus payments for overtime and extra "outside" staff, plus the total annual cost of any permanent staff in excess of those required for student needs (the "extra conference establishment").

Also, the conference income

should carry, not only its own proportion of the basic cleaning and maintenance costs, but the total cost of any extra "cleaning weeks", replacement of furnishings, decorations, etc, which is needed for the extra spit and polish.

This leaves the holiday pay of the "student establishment", and the basic pay or retainers for any weeks to which the staff must be laid-off for lack of bookings. In all fairness, students cannot pay entire vacation overheads, and the holidays and unemployed weeks must be set aside.

In addition, student vacation residence, guests, in terms and vacations, "outside" and non-resident functions, staff residence and meals, and all the other items of expenditure and income which are not directly attributable to students' needs and fees in term or to conferences, must be accounted for. Inevitably, this whole section will be in deficit.

The proportion of each item in the annual budget which justifies belongs to each of these three categories can therefore be tabulated; and, in the present crisis, the first should balance, and the second contribute to the third. The most basic term costs are still within the limits of the student grant, and we can no longer afford to shelve them on to the conference account.

A deficit on the latter may be due to aiming for a trade beyond the hall's potential, or giving services

more ostentatiously, must break even taking one year with another. The hall for 280 students, providing simple, indeed plebeian, board and lodging, might employ about 40 staff in all aspects of cooking, housekeeping, maintenance, and administration.

To take the London weighting along the annual increase is some £10,000 or so per student. And there is essentially nowhere else it can come from, for the London weighting is only funded by the UGC for academic staff.

Should warheads or those responsible for budgeting have anticipated such a cost increase? I can only say that no one could have given a name to such a figure. What vice-chancellor could have supported a proposal for a £70 increase in fees (above the increase already incorporated) under the heading "provision for possible but unknown cost increases"?

One year's budgets, then, must reflect not only the general increase in prices and the special increase in threshold payments (true for universities in general) and the London weighting (a problem for London specifically). As the sting in the tail, they must also reflect a provision for paying off the backlog of the current session with its payment for the London weighting backdated to April 1974 under the UGC rule of "one year with another".

I think other high-cost areas are justified in claiming that London is not alone in having specially high costs. But while their general burden borne only in one specific area, the increase in the London weighting, that, as I have said, puts typically some £35 a session more on student fees than it did last

which conferences cannot afford, too much spit and polish. But the chances are that this deficit will be in the "extra conference establishment".

Of a hall (like it or not) has agreed to cut student needs to its pockets, then its problem is to increase its conference trade. However, it must know the extra required to meet its deficits, the come required to produce this profit, and the chances of getting it.

It might prove that restoration would balance better than expansion, simply because this bringing its term and vacation costs closer into line and reconciling two functions better. If repair must be gradual to avoid reductions, a hall may need help with adjustments, but it has to prove its case to justify this.

Alternatively, the conference rates can be increased, and each year each university reviews its neighbours and wondering much it can get away with.

Of all the irrationalities of academic world this must be prize-winning. Who, as a put a price on something with to sell without actually knowing how much it costs? Is it so heresy to suggest that we might do a lot better if we put our heads together a bit more?

Our prime concern, after all, to pull the halls through this crisis. They have their roots in music, which has proved adaptable to seven centuries and five continents, and they are quite resilient enough to survive.

But if universities merely try to cut each other's throat in the limited conference trade, while working out how to get the best out of it for the sake that resilience will be sorely tested. The universities' halls are not only vacation accommodation, unless we cooperate more and ourselves we shall not cope with our real competitors.

To summarize, an over-simplistic view of university conference is not helpful. Each hall is only with a highly technical economy. Adjustments must be based on analyses of budgets; universities need to cooperate well as complete before blind attempts to increase their income.

Barbara Doughty

The author is warden of Tetley Hall, Leeds University.

A good year with clouds on the horizon

A few years ago the settlement of student grants seemed fair game for frank and open discussion with clear-headed elements of board and lodging, books, travel, and pocket money. From 1973, however, the standard grant has no longer been nationally subdivided and only a global amount is published.

At the same time, the earlier different grant for Oxford and Cambridge University was abolished, in recognition perhaps that their undergraduate year is shorter than the standard 30 weeks of other universities.

One may, of course, guess what elements of the various price indices specific to universities are fed into a calculation of the appropriate student grant within the Department of Education and Science, though whether this calculation bears any resemblance to the final political settlement remains an enigma.

Some account of the factors that bear on one particular hall's budget in London may illuminate the complexity of the situation while leaving unanswered the question of who is to pay.

For the last session, fees were set in March, 1974, in time to take the present and prospective students of the cost and obligations they would be entering into in the coming academic year.

Student grants had not yet been announced and since fees and grants present a chicken and egg situation, little can be drawn from that observation save the fact that in the event, students' fees were at a slightly higher percentage of the grant than in immediately previous years.

Financially, 1974-75 was a good

costs go. The two small clouds upon the horizon at that time were called "threshold" and "London weighting".

The academics settled at an early stage for a 7 per cent rise, the maximum then allowable but supplemented by the last penny extractable under threshold arrangements. Few of those budgeting for expenditure elsewhere in the university in May, February 1974 had heard of thresholds.

In the event, however, what was sauce for the vice-chancellor goose (if he will forgive the analogy) was sauce for the domestic gander. If the highest paid deserved threshold protection from the cost of living, could it in equity be denied our lowest paid, cleaners and cooks?

A similar situation arose under the London weighting. Academic salaries then contained a London element; requests for a London weighting from other grades were met by the formula that their scales already included such an element but it was not separately distinguished.

The last thing of the Pay Board before its dissolution with the political administration, that it fathered it was to recommend an increase from £162 to £399 per annum. Again, if the highest-paid in the university were to get this increase, how could a similar increase be denied to all levels of staff?

While such costs generally in the universities might be met by supplementation, the University Grants Committee rules prevents such money being applied to catering or residential accounts which, within strict UGC rules, are

more ostentatiously, must break even taking one year with another. The hall for 280 students, providing simple, indeed plebeian, board and lodging, might employ about 40 staff in all aspects of cooking, housekeeping, maintenance, and administration.

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Jeffery Law

The author is warden of Tetley Hall, Leeds University.

Venetian intrigue and inertia and the economic crisis threaten a scheme, which has had considerable British support, to make the city an international study centre. Frances Gibb reports.

The idea of Venice as an international study centre was originally conceived as part of the city's restoration programme. It was feared that Venice restored would be a lifeless museum city unless given a new and enlightening purpose. An association called Venice—Island of Studies (VIS) was therefore established in 1967 with the aim of "setting up Italian and foreign cultural institutions, as well as study and research programmes".

What has happened, however, is that like the restoration programme itself, the idea is fast stagnating. This year, nearly 10 years on, a Unesco conference was repeating the same concern that the city should not become a museum living on tourism alone. But little concerted effort has been made by the Venetians to encourage the continuation of schemes involving foreign universities.

The British contingent, although still full of enthusiasm, is dwindling. Students will come from Warwick, East Anglia and Nottingham universities, University College London, and the Courtauld Institute. There is also a course run privately for pre-university students, which did the pioneering 11 years ago.

Although individual Venetians have shown willing, the schemes are threatened by disillusionment on the part of the British universities at the lack of any central organization in Venice and the general inertia there. Economic difficulties at home are a more recent contributor to disillusionment.

The problems are worse each year. While the Venetians, through VIS, declare a vested interest in those coming to study, assistance is in short supply either in providing an information and communications network for the foreigners or in supplying buildings they can use.

The lack of accommodation hits the British hardest. The Americans and Germans have largely overcome the problem by buying palazzos and creating their own centres. The British, however, have to rely on arrangements made from year to year, and on the hope of a room turning up which can be used as a lecture hall. Making arrangements itself is a problem; letters fail to arrive, correspondents disappear without warning from Venice for a few months and plans fall into abeyance.

Last year Warwick University had to conduct its lectures in dingy and damp basement room in the otherwise near empty and enormous Palazzo Fortuni, left to the city by Fortuni to be used for cultural purposes. The private International University of Art is the other occupant but it has hardly enough students to justify its occupation.

John Hall, director of the private pre-university course, has been lucky enough to secure a room in a museum which just about accommodates his 60 students. East Anglia had to conduct seminars last year in the cramped room of the lecturer's flat.

Living quarters for the students are generally found in *pensionari*, but they can be claustrophobic and do not usually have a communal social area.

The promise of a building, or at least a room, which can be used by the British universities has been dangled as a carrot for several years, but the reasons they have not yet been provided are complex.

Dr Martin Lowry of the history department at Warwick said: "There are two points. One, I suppose, is the Italian economic crisis, which was very bad indeed last year. Second, is the ineradicable tendency of the Italians to faction fighting. The VIS committee is ridden with factions; one member will prevent and delay to stop another making a social point or getting hold of some money."

VIS's internal problems do, to some extent, obscure the current session's problems of any one political party, which is necessary in order to pull strings and change the present situation of its being a pawn between parties.

This view was confirmed by the Contessa Annamaria Cologna, one of VIS's original founders, and a driving force behind the conservation groups. "It's not that the Venetians do not want VIS: it's that they do not know if they want it or not. Each political party is terrified of the other and frightened of treading on its toes."

A typical problem emerged last year with the offer of a palazzo by the church. The rent asked, however, was far beyond VIS's or the British universities' means. Purchase of other possible premises, such as the Palazzo Fortuni, is also beyond the town council.

Chronic unemployment is rampant, the Contessa said. "There is someone in power in the

Hopes adrift in Venice



Photograph by Sarah Oull

University of Art or, at any rate, who is not interested in VIS's problems."

In spite of all this, the universities are eager to continue to come, because, they say, Venice provides their students with a unique experience. Since 1967 Warwick has taken a party of up to 55 for the period of the autumn term.

Dr Lowry said: "It provides them with multi-dimensional history; they are living in and observing the place they are reading about. The absence of traffic makes it a particularly suitable background. Already the course has been a great success—that's borne out by experience. People have done very well in Venice because of the immediacy of the thing. It also makes for better staff/student relations."

The East Anglia scheme, which started four years ago, involves some 20 students studying fine arts as either a main or subsidiary subject spending a whole term in Venice during their second year. Their comments were: "It made a difference actually seeing the works of art instead of just talking about them"; "being able to compare good and bad works of art"; "getting to know a city".

One member of staff accompanies them. This year it was Professor Andrew Martin. "For students it has been of extraordinary value, in the character building sense, although that's old fashioned. Practically none of them had Italian and they had to manage. The work has been organized by them, which meant plotting itineraries, getting church opening times and so on. On the academic side, the less articulate become more articulate."

It cost the school of fine arts and music about £400 to send a member of staff out for the 10 weeks, to cover rent and the cheapest form of transport, he said. Students usually managed to get local authority grants to assist with the course. "All we can hope is that the economic situation will improve. We had hoped things would get better from the Italian end, but they haven't. But if we give up now, it will be very difficult to start again."

The course, which involves the study of art, sculpture and politics from 1300 to 1570, is very intensive; three full days a week are spent visiting and holding seminars, two days working and one day out of the city seeing a nearby town.

Professor P. E. Lasko, director of the Courtauld Institute, who started the East Anglia scheme when head of department, sent his own students to Venice this year for the first time. Ten final year BA and MA students went for nearly three weeks at the end of the spring term. This was half-financed by the Venetians and Professor Lasko hoped he could count on help to continue.

Professor Alastair Smart goes every other year usually to Florence, but hope to move to Venice, if more money can be obtained and a permanent base provided there.

Dr John Wilton-Ely, a lecturer in the department, explained why they preferred Venice. "It is a unity in a way no other Italian art centre remains," he said. "One can see Venice on the scale of Ballin or Titian saw it, and it has a peculiarly fine environmental quality which no other Italian city has in such density; a complete sort of town development as a work of art."

Apart from art historians and historians, students of Italian are also sent to Venice under a scheme run by Professor John Hale, head of Italian at University College London, who for the last three years has been sending half a dozen students for a course on "Italian Civilization", to study "the literature and art against its historical and social background".

One scheme already seriously affected by the economic crisis is that run by South Bank Polytechnic for planning students. Last year 50 second and fifth year planning students went to Venice with four tutors for two weeks to study aspects of planning, conservation, townscape and history.

Mr Dick Reid, one of the lecturers, said: "Last year was extremely successful; the real asset was the experience for the students of going out and mingling with Italian students. A lot of good research was done on the ecology of the lagoon, the history of St Mark's or the conservation of the bell tower."

But this year the polytechnic was under more extreme financial constraints, and did not have the money to send staff, who cost about £130 a head for fare and incidentals. Most of the students managed to obtain grants. Mr Reid hoped the scheme might be feasible again next year.

Although John Hall's pre-university course does not run the risk of closure in the same way as do the university courses, it has, in its 11 years, come up against most of the same problems.

The first is lack of communication. "I've come since 1965 and I never even heard of the VIS; which started in 1967, until 1971. When I did meet the secretary, it was purely by chance. It was quite amazing not even to be put in touch with them."

His course caters for some 60 students, usually taking a year off between school and university. Because the course is independent of a university or college it can afford to be more relaxed and flexible in its choice of subjects. Lecturers and discussion groups cover subjects ranging from art history, music, town planning, social psychology, Italian and theatre workshop.

"People here on university courses are assessed as part of their course, so they are rather frustrated, because there aren't proper working facilities for them, although it's a marvellous experience. For my students, it is really like working in the theatre; almost creative."

Because his fight has been the longest, Mr Hall is one of the most anxious to extract from the Venetians a firm commitment to all the schemes, ideally in the form of teaching premises.

A glimmer of hope was sighted at a recent meeting of the VIS committee at which it was revealed that Montedison, a chemical company, has given 20m lire to the VIS, enough to buy and equip premises. It was agreed that a palazzo, possibly the Fortuni, should be acquired for this purpose. But the Contessa doubted if that much could actually be achieved at local level. She thought greater hope of progress rested in the new Government appointment of a minister of culture.

In the meantime, however, it is felt the British universities should consolidate links at their end. John Hall suggested a committee of all involved which would liaise with VIS and hopefully have representation on its committees. Under local points might be provided by the British School, an idea mooted by Professor Hale.

At present this is little more than an idea. It would form a headquarters in Venice for research students and mature scholars of all the topics that could usefully be studied in Venice. Although primarily for research, the premises might also be used for teaching.

The sponsoring committee of the British School, which is a limited company and registered charity, is chaired by Sir John Pope Hennessy, director of the British Museum, and includes Professor Hale (as secretary), Lord Annan, Lord Norwich and Sir Ashley Clarke. It aims to raise some £100,000 which is the amount needed to rent and equip premises, and to provide some scholarships.

"More and more people are going to do postgraduate work in Venice, and while it's possible to work on one's own, to have a centre, a dropping in point for the English and other nationalities, to have that cosmopolitan centre identified with Britain, is something we could be proud of and which would give great pleasure," Professor Hale said.

The Venetians, for their part, are arguing that before they commit a large sum of money, they need assurance of continued British support. The situation is a vicious circle: the British universities will not long be able to continue their schemes without evidence of Italian commitment. British support is clear from their perseverance, but it is doubtful, without speedy action at the other

NOTICE BOARD

Appointments

Universities

Birmingham
Head of department: Jocelyn B. Powell (drama and theatre arts).

Keele
Teacher fellow: T. R. Anelay (David Bruce Centre). Administrative assistant: J. D. Plackett (Institute of Education). Senior lecturer: A. Lelander (sociology). Organizing lecturer:

Forthcoming events

The Third International Child Language Symposium, sponsored by the International Association for the Study of Child Language, will be held from September 3-5 at the School of Oriental and African Studies, Malet Street, London W1. The function of the symposium is to promote the systematic study of child language and foster international and interdisciplinary cooperation in research. Topics include: speech communication; the development of syntax, semantics and phonology. Further information from: Mrs. Natalie Watson, chairman, organising committee, department of phonetics and linguistics, SOAS, Malet Street, London WC1E 7HP.

A conference on Heavy Mixed Concrete, organized by the Department of Civil Engineering in Dundee University will be held from September 28-October 1. Further details from: The conference organizer, Dr R. K. Dhillon, civil engineering department, University of Dundee, DD1 1HN.

The 70th Anniversary Conference of the Horticultural Education Association on Crop protection will be held from September 8-12 at the University of Reading. The aim is to bring members standing up to date with the latest techniques, to present the latest views on harmful effects on the environment.

Grants

Universities

Bristol
Pharmacology—£7,541 from the MRC towards an investigation into the role of amino acid receptors in the central nervous system and their relation to drug action.

Physiology—£24,741 from the MRC towards a project on autonomic and electrophysiological investigations of afferents to the inferior olivary nucleus in the cat.

Microbiology—£19,561 from the MRC towards an investigation into the role of the cell responses and the virus in latent and recurrent herpes simplex infection. Physics—£16,746 from the SRC as a supplementary grant towards an investigation on heavy primary experiment on UK-6.

Biochemistry—£14,172 from the MRC towards an investigation on mechanism of hormone regulation of fat acid synthesis at private dehydrogenase in adipose tissue and liver. Physics—£12,700 (supplementary) from the SRC towards an investigation on the theory of electronic properties of disordered systems.

Durham
£10,548 from the Department of Environment towards an investigation on environmental processing, under the direction of Professor R. J. Cramp; £13,358 from the European Economic Community for research into the effects of zinc and lead pollution of vegetation in flowing waters, under the direction of Dr B. A. Whitton; £12,000 from the Paul Instrument Fund for the construction of an X-ray camera for magnetron measurements, under the direction of Dr W. D. Cornish and Dr B. E. Tappin; £10,329 from the MRC for an investigation into the deep structure of the Kona dome, under the direction of Dr R. E. Long; £1,200 (supplementary) from the Research Laboratory towards an investigation into the application of neutron inelastic scattering to chemical problems, under the direction of Dr C. F. Vandenberg; £1,250 (supplementary) from the Institute of Petroleum for an investigation into analytical techniques, under the direction of Dr D. R. Clark; £4,656 (supplementary) from the NERC for research into the population dynamics and ecology of *Leptodactylus* under the direction of Dr M. Z. in vivo.

Oxford
Experimental psychology—£5,030 from the SRC for research into the perception of children's understanding of some basic concepts of number; £1,197 from the SRC for a study into the sex differences in psychological development in children, under the direction of Dr J. Gray and Dr H. Fairweather. Sheffield College—£21,086 from the SRC for research into higher education, under the direction of Dr A. Halsey.

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R. M. Procek (adult education). Lecturers: R. E. Massara (physics); H. Suganami (international relations). Wales: Reader: Dr B. H. Knight (forensic pathology).

Polytechnics
Plymouth
Principal lecturers: S. Broadhurst (electrical engineering); H. G. O. Rowett (educational technology); Captain W. V. Day (planetary); C. A. Rich (transport); S. I. Egglestone (microbiology); F. Johnson (accountancy); S. E. Watley (statistics and operational research).

and to consider the economics of crop protection. Further details from: The conference secretary, Mr W. R. Buckley, department of agriculture and horticulture, The University, Surrey Gate, Reading RG6 2AT.

Kingston Polytechnic and North London Polytechnic together with Michael Brown, landscape architect of Richmond, Surrey, are co-operating in a series of five landscape design seminars to be held at Cranborne Lodge, Windsor Great Park, from October 1975 to January 1976. The first five seminars are designed for all those who involve dealing with land and natural resources. The introductory series will deal with the work of the landscape architect. Fee: £50 each seminar. Booking form and programme details from: Graham Bennett, division of human environment, Kingston Polytechnic, Knights Park, Kingston upon Thames KT1 1QJ, Surrey.

The department for external studies, University of Oxford, is holding a weekend conference on The Beginnings of Urbanism in Barbarian Europe from October 10-12, 1975, at Rewley House, Welington Square, Oxford. Application forms from: The Director, Oxford University Department for External Studies, Rewley House, Welington Square, Oxford OX1 1JF. Shared residential: £19; £23 single. Non-residential with meals: £12.50; non-residential without meals: £7.

social organization and symbolism in Sumbo, Eastern Indonesia, under the direction of Dr R. Neefham.

Salford
Chemical engineering—£5,916 from the SRC for research into an investigation on experimental study of a fixed bed catalytic reactor, under the direction of Dr R. Hughes.

Mechanical engineering—£5,875 from the SRC for continued research on fuel technology and design of press tools for sheet metal components under the direction of Mr B. Fogg and Dr T. R. Crossley. £5,279 from the Ministry of Defence for research on ion plated coatings on titanium for protection against galvanic corrosion and wear, under the direction of Mr D. G. Teer.

Research into the investigation of the influence of component design and process capability on manufacturing costs with reference to general cost systems, under the direction of Professor A. W. J. Chisholm and Mr B. Fogg.

Electrical engineering—£1,445 from the Atomic Energy Research Establishment towards a research on ion beam studies, under the direction of Professor G. Carter.

Sheffield
Centre for Environmental Research—£5,662 from the SRC for a research project on monitoring the structure planning process in Metropolitan County Council, under the direction of Mr R. A. Barker.

Stirling
Aquatic pathology unit—£10,000 from the Shell International Chemical Co Ltd for a post-doctoral research fellowship on the health and growth of trout under various conditions of stocking rate and disease status under the direction of Dr C. J. Shepherd.

Sussex
Science policy research unit—£4,839 from the SRC for research into attitudes to change in technology and work structure in the engineering industry.

Colleges
Ealing Technical College
School of Business and Social Studies—£5,982 from the SRC towards an investigation into patterns of food consumption in Britain 1914-1940, under the direction of Dr D. J. Oddy.

General
The Tavistock Institute of Human Relations—Career development and institutional change—£40,277 from the SRC for research on consultation, participation and decision making in organizational change, under the direction of Dr P. A. Heller.

National Foundation for Education Research—£5,959 from the SRC for research in techniques for reporting pupils' knowledge and understanding on transition from primary to secondary education, under the direction of Dr J. Halsey.

Social and Community Planning Research—£5,820 from the SRC for a survey methods research programme.

Awards
The Edmund C. Gardner Prize, in the field of Italian studies, has been awarded to Michael Baxandall, reader in the history of classical tradition in the Warburg Institute.

The J. U. Robertson Prize, in the field of German studies, has been awarded to Professor William Edgar Yates, University of Exeter.

The Burdett Coutts Prize 1975 has been awarded to: Bruce Kevin Lovell, St Catherine's College.

Chairs

Professor M. A. M. Roberts, professor of English and head of the department of English at Queen's University, Belfast, has been appointed professor of English and head of the department of English at the University of Keele, from October 1.

Dr Peter Jarratt, at present director of the computing laboratory in the University of Salford, has been appointed to the chair of computing and director of the computer centre in the University of Birmingham from October 1.

Professor Raymond A. Cunningham-Green, at present professor of management mathematics at Twente University of Technology, Holland, has been appointed to the chair of industrial mathematics in the department of mathematical statistics, University of Birmingham, from January 1.

Honorary degrees

Loughborough

Dr J. J. Richards, vice-chancellor of the University of Loughborough; Sir John Davis, chairman of the Rank Organisation; Professor Sir Sam Edwards, Plummer professor of physics at Cambridge University and chairman of the Science Research Council; Dr N. A. Burgess, vice-chancellor, New University of Ulster.

Manchester

MA—J. Butterworth, E. W. Fox, The Reverend P. D. Hetherington, M. Kennedy, Dr Hans-Peter Kruger and honorary alderman Mrs G. Lord.

Salford

DSc—Sir John Llewellyn, director-general, British Council; Dame Kathleen Ollerenshaw, lord mayor of the city of Manchester.

DSc—Mrs Constance Peterson, president, PUC; Sir Arnold Wellesley, managing director, General Electric Company.

MA—Councillor Harold Singleton, former mayor of the city of Salford; Dr Joseph Needham, master of Gonville and Caius College, Cambridge; L. S. Lowry, artist.

Sheffield

DSc—Dr J. H. Chesters, chairman of the University of Sheffield's advisory committee on chemical engineering and fuel technology and honorary lecturer in industrial research in the department of chemical engineering and fuel technology.

LittD—Dr G. Cullen (architectural), Dr R. Hon Lord Armstrong of Sandhurst, chairman of the Midland Bank Group.

DSc—Professor Sir Andrew Kay, part-time chief scientist, Scottish Home and Health Department.

MA—Anthony Miles, second year undergraduate student (Faculty of pure science).

Sussex
LittB—Sir Michael Bakon, retired film producer; Dr B. W. H. Brinliff, education officer, London Education Authority; Sir Rev. R. Reeves, formerly Bishop of Johannesburg, president, Anti-Apartheid Movement; Dame Violet de Valois, governor of the Royal Ballet.

DSc—Professor Jacques Heyman, professor of engineering, University of Cambridge.

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Recent publications

British Image 1 is the first issue of a periodical published by the Arts Council of Great Britain to appear annually which will present the work of contemporary photographers who have successfully completed projects supported by Arts Council photography awards. Available from Arts Council Shop, 28 Saville Street, London W1X 1DA, £2.00.

We regret that owing to shortage of space the Open University programmes are not published this week.

Noticeboard is compiled

The largest-ever conference of international university leaders starts in Moscow on Tuesday. A special correspondent previews it.

IAU considers innovation and social development

From Tuesday, following a decision taken five years ago at the fifth general conference of the International Association of Universities (IAU) in Montreal, the university of Moscow will host the largest international assembly of university leaders ever held.

The IAU was founded in 1950 in Nice, and the Moscow Conference will mark its twenty-fifth anniversary. It is still very young compared with some of its member universities, with their long centuries of existence, but history has been moving very fast for universities since 1950.

Three periods at least may be picked out in this short span of time. First, there was that of uneasy recovery from the devastation of the Second World War, with the threat of a new war overshadowing it. This was when IAU was founded, with a largely western membership. Then came the period of rapid university expansion, partly due to the political competition between the various blocs, which marked the Cold War, but which also coincided with a gradual thawing up of the international atmosphere.

These developments greatly helped the growth of the IAU, and membership increased in the emerging countries of the Third World and in the socialist countries.

This was abruptly ended in the third period, when the figurative explosions turned into real ones on many campuses and in the streets of many big cities. For some parts of the world, the student revolts ushered in time of intellectual uncertainty, of social crisis, and of financial stringency—in which a majority of universities are now living. And these might well have brought on a similar crisis for the international association.

The fact is that they have not done so—yet. But despite their growing internal difficulties, the majority of universities have not retreated into isolation. On the contrary, there are many signs that they feel the need for more international cooperation. Membership of IAU is one indication of this. It was hoped originally that it would have 200 members. At the beginning of 1975, there were 600 in 108 countries, and there will be nearly 700—and over a thousand university figures taking part.

Doubtless the interest of visiting Moscow accounts partly for this large attendance, but it is certain that those in charge of university administration and development all over the world feel a need to exchange opinions about the future of their institutions and the difficulties which affect all planning today.

Under the general title: *Higher Education at the Approach of the Twenty-first Century*, the conference will discuss two themes: *Higher Education and Problems of Economic and Social Development* and *Universities and Innovations within Higher Education*.

The working paper prepared for these discussions, based on previous IAU seminars, tries to identify a few topics on which to concentrate. Serious though they may be, financial difficulties are not the most important for them are symptoms of a change which goes deeper than economic and which is affecting the very functions of education in research.

Scientific research—its aspects of it—is at present an increasing mistrust and suspicion. Large sectors of public opinion are now involved in scientific programmes which often cannot control or guide their own values but are largely controlled by the big machines of science and political power in the world. And many consider these blind, or even evil.

Knowledge is less and less an end in itself and is increasingly becoming a means to other ends, some of the basic principles of modern university and scientific ethics being flouted. This is evident in the case of nuclear energy. In other words, some of the basic principles of modern university and scientific ethics being flouted. This is evident in the case of nuclear energy.

There is a constant drop in the number of working women after the age of 25. After marriage many women lose interest in their jobs, for in Korean family life children are essential. The status of mother is more venerated than that of wife, and if a wife bears no offspring there will be considerable pressure to do so.

The average number of children is three, so that mothers begin to have more time in their early thirties. In the last few years, some of them have gone back to their studies, but few employers are willing to give them a job.

Angela Chung is one of the few exceptions. Married to a university lecturer, she went to the best girls' high school and the prestigious Seoul National University. Shortly after her marriage she accompanied her husband to Manchester University, where they lived on and off for 10 years.

Now she teaches in an American school, employing a full time man to look after the boys. But her high school friends and fellow graduates have been out of the country, and they will still spend most of their lives waiting upon their menfolk.

Korea

Degrees of marriage

From our Correspondent

A father of three holding a top banking position in Seoul admits he goes out drinking in hostess bars nearly every night. His wife is told it is part of his job, and passively accepts it. Yet she is a fully qualified teacher with a degree.

"Here in Korea a degree is a marital and not an academic qualification," I was told. It is not dissimilar to the *tanki daigaku* (junior colleges) in Japan, who run two-year courses, and are similar to finishing schools which aim to make girls marriageable.

In Seoul there are 37 universities, many run on American lines. The large number grew after the Korean War, when businessmen built their own private institutions of higher learning, because at the time conscription was deferred or reduced if the man was a graduate.

Seoul's Ewha women's university, founded in 1886, is the largest establishment of its kind in the east. Girls who attend Ewha come from middle and upper class families and their problem is that they cannot hold jobs after marriage. Recent statistics show that only one-third of women graduates work and most private organizations, such as banks, ask them to leave when they marry.

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'Don't ms out on s/he'

New York's state education department has issued guidelines for teachers on how to avoid sex stereotyping in the classroom. Teachers should beware of textbooks which portray boys as active and aggressive, and girls as passive.

They should teach children about women having power, and making significant contributions in history and literature. And they should avoid language which reflects biased attitudes about sex roles and characteristics.

The guidelines say that, in descriptions of women, a patronizing tone should be avoided. Women should not be treated as sex objects or portrayed as weak, helpless and hysterical, or made figures of fun or objects of scorn.

Daring and innovative women in history and literature should be treated fully, and leaders in the fight for women's rights should be honoured and respected rather than mocked or ignored. Sometimes men should be shown as quiet, or passive, or fearful, or indecisive, or illogical and immature. Similarly, women should sometimes be shown as tough, aggressive and insensitive.

The section on language suggests that the generic pronoun "he" should be avoided wherever possible by substituting the plural form, or alternatively the "she" and "s/he" or by using the symbol s/he.

Teachers should point out any sexist or racist bias to their pupils. They should encourage classroom activities and make use of design, student research, projects, role-play, and role-play.



Women in higher education: reports from THES correspondents abroad



France

Girls have longer courses—but get the worst jobs

From our Correspondent

Girls stay longer at school than boys and do better in examinations—but the courses that most of them follow lead to the least interesting, less well paid, and less responsible jobs, according to an analysis of current statistics and research recently published in the monthly *Le Monde de l'Education*.

It says that girls have equal access to institutions at all levels, but that the length and type of their schooling is still conditioned by social customs and attitudes which in fact still deny them equality. In the teaching profession, for example, there are more women—but mainly at the lower levels.

Girls and boys who go to nursery schools. At primary level, parents tend to send daughters rather than sons to private schools, many of them Catholic, and many of them for girls only.

During secondary education the proportions of girls and boys are roughly equal, but more girls than boys stay on until 19.

For example, 72 per cent of daughters of skilled workers stay on after 16 compared with 59 per cent of sons. This is because it is easier for boys to find work at that age, and because they can become apprentices.

Girls and boys who do stay on also study different subjects. Girls take courses like literature, languages or the arts which have less standing, and less definite career openings.

At the final baccalaureat examination around 70 per cent of the candidates in the A series literature, languages and arts are girls. In the C series mathematics and physical sciences the percentage of girls is only around 30 per cent. Girls seem to avoid courses which lead to what are traditionally regarded as masculine careers—but at the baccalaureat more girls than boys succeed: in 1973 it was 68 per cent of girl candidates as against 60 per cent of boys.

The situation is worst at the technical education level mainly because of social conventions. In the secondary technical colleges, 85 per cent

want to become workers because it would limit their chances of getting married.

Most girls say that they want to find jobs in commerce, fashion, nursing or social work.

Few girls take electronics. Yet the industry employs large numbers of them, using women with other experience so that they do not have to pay them as qualified workers.

Other technical courses lead only to repetitive jobs in the clothing industry or to domestic jobs for which they are overqualified.

Of those who succeed in the baccalaureat, 80 per cent go on to higher studies—but the figure for girls who go on is only 45 per cent. The rest finish their education.

At university most girls follow the same type of courses as before: one out of three, for example, takes literature and the arts. Only about a third of medical students are women, but they make up almost two thirds of pharmacy students.

Fewer than 20 per cent of those enrolling for science courses, and fewer than 8 per cent on engineering courses are women.

Women have a higher drop-out rate and their percentage at each level gets progressively smaller. This seems to be partly due to marriage, but it may also be because there is little evidence to show women that the better their qualifications the more chance they have of getting better pay, and more responsible jobs.

For example, nearly all nursery school teachers are women, as are 73 per cent of primary school teachers, and 54 per cent of secondary school teachers—and only 10 per cent of university staff. In primary schools, 53 per cent have headmistresses, but in the senior secondary schools only 31 per cent of principals are women.

There is no woman among the 75 university presidents, nor among the 25 rectors of academies, who administer the educational system under the Ministry of Education. The minister is a man, so is the secretary.

Sweden

Report suggests creating 'watch dog' committees

From Mike Duckenfield

STOCKHOLM

The creation of special committees which would monitor the career prospects of women in higher education is one of several ways of tackling inequality between the sexes suggested in a recent report published to coincide with International Women's Year.

University faculties and college departments could report to one of these committees within each institution on whether they are employing more women, says the 48-page discussion document published by the Office of the Chancellor of the Swedish Universities (UKA). Sweden's central planning body for higher education.

Karin Westman Bera, a lecturer at Uppsala University and one of four women contributors to the report, argues that women are discriminated against in higher education as much as in many other professions.

She suggests that women should be represented on all appointment boards in higher education, that universities and colleges should run pre-schools for the children of staff, and that a monitoring committee should be set up.

There are still major differences between the sexes over graduate employment prospects and the

chances of doing research, says the report. The authors cite a follow-up study of students graduating in spring 1973. In January last year, 42 per cent of the male graduates had monthly incomes above 3,500 Skr (£380), compared with only 23 per cent of their female counterparts; 22 per cent of the men earned more than 4,000 Skr (£440) a month, against only 6 per cent of the women.

The report says that only 50 of the 1,400 members of the Swedish lawyers' union are women, although in the last ten years between one-fifth and one-third of all university law students were women.

The report supports the idea of a six-hour working day based on flexible hours.

The authors point out that the higher in education one aspires, the less chance there is of success for women. In eight faculties in Sweden's six universities, the authors claim that 33 per cent of undergraduates were women as opposed to only 18 per cent of post-graduates.

Nevertheless the report shows that the number of women gaining entry to some university courses has increased significantly in the last decade. There are 35 per cent studying medicine and 35 per cent studying chemistry, 34 per cent studying architecture, and 11 per cent studying technology.

United States

Women's studies programmes 'must improve their status'

from Frances Hill NEW YORK

Political activism, generally believed to have died since the 1960s, still thrives in one area—that of women's rights.

According to Florence Howe, of the State University of New York, in an introduction to Carnegie Commission collection of essays on women in higher education, there have been attempts to get child care facilities, centres of relaxation, counselling and research, and programmes of women's studies. On a campus women have set in for their demands, and campus festivals, conferences and lecture schedules have been dominated by women.

But despite this, radical changes will have to be made if women are to gain real equality of opportunity, agree the four authors of *Women and the Power Challenge*.

A man can build a reputation while young by minimizing family life. But women normally bear and raise children at precisely the time when they need to compete for future success.

Even if there was no discrimination, women would be free of pressures to avoid success and authority, says Arlie Russell Hoschild, of the University of California, Berkeley, only a handful of women would reach the top of the academic profession anyway. It demanded total commitment at a time of life when they could not possibly give it.

Adrienne Rich, a poet and professor of English at the City University of New York, argues for university child-care centres available for children of all students, staff and faculty members. "There would be a conscious counterweight against the sex-role programming of patriarchal society," she writes.

The authors agree that programmes of women's studies must improve their status if they were to affect men's attitudes towards women and women's attitudes to themselves. Content must be changed to portray the place and achievements of women in history, science and literature.

Women and the Power to Change, Edited by Florence Howe, Sponsored by the Carnegie Commission on Higher Education, McGraw-Hill, \$7.95.

New Zealand

Our male colleagues are patronizing, say female staff

from Brian Priesley CHRISTCHURCH

Women staff members of Victoria University often resent the condescending and patronizing treatment they receive from male colleagues, according to a committee which has spent a year looking into the status of women at the university.

The committee's suggestions include: An association of women staff members, which would act as a pressure group and provide support for female staff members in the predominantly male environment.

Shared or half-time appointments. Academic positions should be negotiable as full-time, half-time, or part-time, and should be advertised as such. New categories of permanent positions might be introduced to cater especially for women's needs.

At least one woman member of any appointment committee if there are any women applicants.

The committee discovered that women made up 38.2 per cent of the university's first year students, and 3



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An injustice on salaries

Although it is still subject to negotiations, the Government has now made its salary offer to university teachers for October, 1975. Whatever the merits of the arguments put forward by the University Authorities Panel, it is unlikely in the present circumstances that it will significantly increase the salary of university teachers. An attempt can therefore be made to assess what has happened to salaries in universities, colleges and polytechnics since the Houghton Report was published last December. So much unprecedented anger and controversy has been aroused since the Houghton findings that it is important that the assessment should be neutral and that public opinion should be taken into account.

The major point is that the Government has achieved its aim of securing broad comparability with salary scales in universities and polytechnics. Salaries in colleges and polytechnics have increased by nearly 50 per cent since January, having been backdated to May, 1974, and have been paid.

Against this, university salaries have risen in the comparable period by 10 per cent, with rise in October by about 25 per cent to 30 per cent, and on the Houghton criterion a year's enhanced salary has been lost, since there has been no backdating. Each university teacher has therefore been robbed of at least £1,000 in gross salary forgone in the case of Mr Prentice, and to the defence of the Social Contract or because of the doubtful wisdom, in retrospect, of settling so quickly for 3 per cent last October.

If the present offer to universities stands, an almost exact university-polytechnic comparability will have been established, with the career scale in polytechnics going from £3,279 to £6,417 compared with the university career scale of £3,174 to £6,446 and with top "teaching" salaries of £7,578 in polytechnics and £7,742 in universities.

As if this was not enough even for the university teachers' most sympathetic to the claims of the polytechnics to stomach, civil servants or senior local government officers, whose jobs and salaries flourish unchecked while the nation

the danger in a language with social sciences course is less than in some other languages. The long been used as the passport to the study of a society not one's own—in the past at second-hand, through its literary artefacts, but now, increasingly, at first hand, from within, and with the analytical tools of the social sciences.

It is difficult to see how, with a combination of disciplines so analytically based as say—political science, sociology, economics—a student can spend any time living in and studying a society without coming to his/her own conclusions. It is equally difficult to see how such an approach could lead to a "stale, unchallenging presentation of received knowledge".

Any course is composed of both staff and students. Any course offering a combination of disciplines offers a diversity of approaches and an equivalent diversity of responses. It is extremely unlikely that such a course could acquire the sort of ideological identity that could be used for political ends.

Dr Johnson gives scant attention to the much more interesting questions of the practicality of combining different disciplines and the machinery for maintaining the theoretical levels in each of them.

There is no doubt that the threat of political manipulation in higher education exists, but much more in the relationship between "research" and "teaching" and "learning" than in the definition of "integration". The day may come when he who says the pipe is "red" is another story.

Yours faithfully,
W. STOKES
Part I Tutor, R.A. Hons Social

LETTERS TO THE EDITOR

Salaries after Houghton—Part 30

from Dr Trevor Marshall

Sir—Your article on university salaries (*THE TIMES*, August 1) states that it is the policy of the Association of University Teachers to "smash Houghton". I would challenge you to find any evidence that there is such a policy, either in resolutions adopted by AUT council or in any statement by an AUT officer. We have never considered the increases awarded by Houghton to non-university teachers anything other than well deserved and long overdue.

The comparability which Houghton sought to establish was between university and non-university teachers doing degree-level teaching. In the course of this comparison, Houghton used the level of university salaries as they should have been in April, 1974. Mr Prentice refused to allow this same yardstick to be applied to university teachers in October, 1974, because they were not included in Houghton's terms of reference. So other groups may be compared with us but we may not be compared with ourselves.

The net result is that, if we were to accept the 26 offer, the university lecturer would be paid less than the combined lecturer II/senior lecturer grade in further education (Your correspondent has made the elementary mistake of equating "lecturer" in the two career structures, and therefore simply cannot have read Houghton.)

If our members do accept the 26 it will not be as you suggest because we have "smashed Houghton" but rather because they think that the success of the Government's pay policy is more important than the correcting of our own injustice. I grant this is a possibility, but would not myself give it much of a chance.

We have, during my working life, been chosen three times to be the group on which a brave new inflation-breeding policy is first tried out—Selwyn Lloyd's Pay Pause 1962, Prices and Incomes Board 1968 and Social Contract (mark Prentice) 1974. In each case the policy failed but we remained pegged. Now we are expected to act as whipping boys a fourth time.

We must be the only group which has gone from the statutory policy of the Tory Government to that of the Labour Government without the benefit of the Social Contract (mark TUC) in between. So, rather than making rash predictions about the AUT's response to the 26, as your correspondent does, I suggest you wait for the decisions of our emergency council.

Yours faithfully,
TREVOR MARSHALL (national executive, AUT),
University of Manchester.

from Professor Peter Tiley

Sir—It seems very sad that all the bitterness engendered by the universities' salary issue is likely to continue for many months unless the Department of Education and Science and others (including yourself, Sir) are prepared to accept the independent findings of the arbitration tribunal on university pay. Let us examine the facts.

For the 1975 salary award, the AUT Council accepted, not without reluctance, the proposal of Reg Prentice that it should be based on the Houghton principle of

Bradford's federal college

from Mr D. V. Wheatley

Sir—Last night with interest (*THE TIMES*, August 3) a heading "Pioneer federal plan approved". The article suggested that there is a new federal voluntary institution and that the government has agreed to more constitutional proposals than it had in the past.

May I remind you that the City of Bradford Metropolitan District Council was agreed by the Secretary of State on December 18, 1974, and in the letter of approval the Minister noted the uniqueness of the proposal. You may recall that this proposal recognises the inter-relationship of all further and higher education.

The five colleges (Bingley and

"broad parity" between university teachers and further education teachers on similar work.

The quantitative interpretation of "broad parity" was established by the arbitration tribunal who concluded that because of stricter probationary requirements, longer incremental scales and so on, the university lecturer at the top of the scale should have roughly 9 per cent more than his further education counterpart, with corresponding differentials on higher grades. The AUT had argued for much bigger differences, the DES for much smaller ones, but the tribunal listened to all the arguments and made its independent decision.

The Government White Paper has, for the moment, blighted the hopes of securing full justice for the university claim, but at least the White Paper directed that all arbitration awards should be implemented. It is therefore not surprising that the AUT expected the current Secretary of State to honour the obligations of his predecessor and to offer October 1975 scales for universities which, relative to April 1975 FE scales, would be at least as favourable as the arbitration award.

It came as an incredible shock to us in AUT that the DES have made an offer which effectively nullifies the findings of the arbitration award. Such a breach of good faith is surely unprecedented in public service. How many times must the AUT resort to independent arbitration in order to secure a minimum of justice when all other comparable groups have been treated so generously?

Yours faithfully,
PETER TILEY,
Vice-president (past president),
Association of University Teachers.

from Mr John Radford

Sir—So the Houghton principle of comparability for university and polytechnic staff is "smashed". It did not last long; but the universities are still screaming for "justice".

This department, Sir, has three separate honours degrees in psychology. It has taught masters courses in the two largest areas of professional psychology—educational and clinical. It has research students preparing for MPhil or PhD. It has 34 academic staff. No-one, I suppose, would suggest that their qualifications, their experience, their ability, their "standard of work" are not comparable with those of the better universities. Yet at almost every point they will be paid less than their university counterparts. I wish, I wish, that someone would explain to them the justice and the logic of this, for I cannot.

In the false dawn of Houghton I thought optimistically that we might at last see real equality of opportunity for both staff and students even within the fundamentally inequitable binary system. It seems to me odd that many of those who condemn as unjust a tripartite system of secondary education are equally vehement in maintaining a dual system at the next level.

Yours faithfully,
JOHN RADFORD,
Dean of the Faculty of Human Sciences,
North East London Polytechnic.

Margaret McMillan and the College of Art and Technology, and Keighley and Shipley (further education) all have representatives who constitute the Standing Academic Planning Board. This has a formal standing in the authority's scheme of further and higher education, has assessors from the Inspectorate, the Regional Advisory Council and this division and is serviced by a full-time academic planning officer and clerical staff.

There is considerably more detail, of course, to the scheme and we are in the process of preparing a more detailed statement of progress to date and an indication of future development.

Yours faithfully,
D. V. WHEATLEY,
Chief Further Education Officer.

Manpower

from Professor S. E. Hunt

Sir—I have been a vociferous and occasionally violent critic of Lord Crowther-Hunt's views for longer than most. It really started through the joint ownership of a triptych almost 50 years ago, but he must be right in his plea for a greater degree of manpower planning. This is particularly true of the thesis that if we do err in this, as we inevitably shall, it should be towards producing too many scientists and engineers rather than too few.

The converse has been the case for too long with the result that the upper echelons of industry, government and the Civil Service are short of technically competent people to the point of being incapable of recognizing this deficiency among their own ranks and will let us serve to reinforce the prejudices of a general public inclined to sympathize on emotional grounds with "Black Paper" views about the location of standards and quality, and those of academics similarly disposed.

Having in a polytechnic launched two of the original CNAAs in arts and social studies and then transferred to a university, which happily seems to appreciate a breadth of educational interest on my part, I detect here an urgent need to improve the image of the council's work.

Only the odd sensation, about a London polytechnic's internal affairs or a clash over the proposals put forward by the University College at Buckingham, make much impression on the public consciousness, and that largely irrelevant to the interests of potential students.

Tens of thousands of young people now have CNAAs degrees and there are many interesting stories to tell of their achievements. They have been found, for example, researching, often under university auspices, in Warsaw or Nimey, working in Brussels for the EEC and for the United Nations in New York or lecturing in Saudi Arabia or Tasmania.

In some cases the special character of a CNAAs course has given them a unique blend of skills. It should be part of the "confidence-building measures" for the institution, and it is here that they frequently have the advantage over their university counterparts. The further the technological developments tend to be recognised and exploited, while here they are largely ignored.

European "technocrats" get much and contribute much because of their mobility. A typical career pattern may include periods in industry, the Civil Service and education, but this is unusual in the UK in view of the Government's recent interpretation of its income policy, anyone wishing to transfer from the Civil Service to a university would be rightly rejected.

So diffuse and volatile are the arguments of a literary critic in full spate that the linguist is left wondering what the point of the dispute was and why he ever even tried. The literary critic meanwhile thinks: "What boring creatures linguists are! Wouldn't it be my daughter marry one?" And that, so far as he is concerned, is that.

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He went on to describe the journal as "regressively modern", associating it with "pop art" and arguing that criticism, unob-

structed by theoretical caution, ought to have more of "delighted practice". I will, by way of reply, attempt to summarize in the remainder of this article what I take to be the aims of literary criticism.

Literary semantics takes as its starting point the need to investigate the epistemological problems which tend to be raised more acutely in literature—I omit the inverted commas in deference to the reviewer—than in any other mode of linguistic utterance.

A work of literature is, on the one hand, an act in history; it is also a structured signal which causes psychological responses. psychology, neuropsychology, mathematics, anthropology, sociology, history and many other studies are important concomitants in the search for truth in literature.

More specifically, it is important to start with an acknowledgement that a work of literature is a linguistic utterance, and is to be analysed in terms of the rigid differentiation between transmission and reception which has been a *fundamentum divisionis* in linguistics for many years.

Literary semantics must aim to formulate adequate principles. I believe that a science should possess a rigorous empirical component and an imaginative, speculative one, these two components being mutually corrective.

At the empirical level in literary semantics we begin with the *principle of principles*: an adequate principle is one which, having been defined and demonstrated, can be operated independently by other linguists.

This enables us to proceed to formulations like the *principle of objectivity*: at the empirical level, the linguist recognizes only those entities which are textually signalled. Such conditions seem to me self-evident. By this I mean, to put it crudely, the determination on the part of a writer to avoid indicatives where he is strictly entitled to use only subjunctives. Use of illic indicatives is a shortcoming from which many of us suffer, though the literary critics, I suppose, more than most.

Efficiency of critical discourse—I have no doubt—could be improved by scrutiny of the



Mr Bill Gutteridge.

A book recently published by a former senior assistant registrar of the Council for National Academic Awards, unfortunately and undeservedly, does little for the reputation of that body. It has all the limitations of old-fashioned constitutional history in that it is overconcerned with the trivia of institutional development and conveys no sense of achievement in real human terms.

It suggests the tedium of hours of sterile, rather than stimulating, educational debate. As a longstanding member of the council's committees and boards I know this picture to be untrue, but the danger is that it might serve to reinforce the prejudices of a general public inclined to sympathize on emotional grounds with "Black Paper" views about the location of standards and quality, and those of academics similarly disposed.

Indeed, failure to recognize a "good thing" when they see it is our top people, whether it be pacifism or a nuclear reaction, is a main cause of our present economic plight.

The situation in the United Kingdom contrasts sharply with that of our continental neighbours and our competitors. In France and Germany, in particular, industry, the Civil Service and most education institutions are dominated by the graduates of the *Grandes Ecoles* and *Technische Hochschulen*, who have undergone a prolonged and rigorous training in science and technology. As industrial leaders they seem to master the intricacies of the balance sheet without too much difficulty and, miraculously, by the standards, often become politicians.

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CNAAs's untold success story

Bill Gutteridge discusses a new book by Michael Lane on the Council for National Academic Awards



Mr Michael Lane.

The claim that the written syllabus has progressively lost its status and authority has a reminiscent ring. The quality, intentions and understanding of academic staff are obviously more important. For this reason it is the feel of spirit of a course, department or group of staff which is now vital to the winning of CNAAs approval especially for courses in the humanities.

The so-called "hidden curriculum" behind the syllabi and sometimes grotesquely detailed teaching schemes, may not only refer to the quality of extra curricular activity and to cross-fertilization between the courses and departments; the euphemistically termed and covered "counter-course" for which the recognized curriculum is just a front is probably not a complete fiction. More generally the continued insistence, with rare exceptions, that each syllabus be examined separately is a matter for regret.

CNAAs courses have been as quick as any to reflect the advantage to a student of being able to defer his final preference until he can make an informed choice—though that may be to beg the question on some modular courses.

Initially there was a spontaneous sympathy for large-scale propositions in this category as there was for new forms of examination and assessment. The subsequent tempering of sympathy with caution should not be regarded as reactionary, taken overall, balancing one board's liberalism against another's conservatism CNAAs provides the best if not the only national forum for the rational consideration of such questions.

This view is perhaps strengthened rather than invalidated by the fact, as Eric Robinson has noted in these columns recently, that the increasing proportion of college—or rather polytechnic—students has tended to modify the innovative inclinations of, in a sense, self-selected and committed university teachers. There is no doubt that the next five years or so will see more innovation, whilst in so doing the council begins to change its nature. Part-time degrees, which some departments thought of as a modular basis 10 years ago, have received the boost they needed from the Open University.

The possibility of collaboration involving a mixture of home study with attendance opens up a new prospect: some students, especially in the big cities, are beginning to connect a mixture for themselves by switching from correspondence tuition to full or part-time study.

Some of the energy spent on the controversy over literacy and numeracy for all students might perhaps have been better spent at the other end by looking more closely at courses in all fields which are so narrow as to be virtually exclusively technical.

Design for Degrees, by Michael Lane. Macmillan, £5.95.

The search for the hidden meaning in literature

No one who is acquainted with both linguistics and literary critics can have failed to observe that the perspectives in which academics from the one side or the other hold their material, their utterances, are so disparate as to make communication between the two sides intermittent—to say the least.

The linguist cannot tie the literary critic down in an argument: he stops the critic and challenges him to analyse an assertion he has made, pointing out that it contains dubious semantic assumptions, is distorted by value judgments. The critic replies and, typically, before he has reached the end of his first sentence has invoked Boccaccio, Virgil, Flaubert and D. H. Lawrence.

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The recent approval of a part-time Bachelor of Arts in humanities to start at Bolton Institute of Technology this autumn is an important landmark. Cooperation between universities and other institutions of higher education, with interesting consequences for what has seemed to some of us from its initiation a fairly differentiated binary system, is now capable of being facilitated by the established strength of the CNAAs.

In a period of financial stringency there may be clashes between the various authorities, academic and administrative, over standards as related to material and staff resources. The maintenance of reasonable standards is clearly essential and there are signs that under CNAAs auspices restraint, the proper use and development of staff and improved quality of the student's experience are not necessarily incompatible.

For the council's general value and function lies not simply as a forum for the discussion of educational ideas. Partly because, unlike the universities, its committees and boards have Department of Education and Science assessors in attendance it is an important channel for direct communication, influence and even pressure. The social need and desirability of courses may not be its immediate concern, but the interaction between these and ultimate academic quality is often not far to see.

The ultimate success or otherwise of the Diploma of Higher Education may well depend on the realization by all parties of the implications of policy on student grants for the nature of the two year programme. The same issue of four years, to a degree, rather than three—may arise (one hopes not necessarily) when the sixth form curriculum is reconstructed on a broader basis and degree courses are in consequence redesigned.

A meeting or conference of one of the more central of the CNAAs subject boards is, because of its membership mix, capable of crystallising a broad range of academic opinion more quickly and surely than can otherwise be achieved.

Michael Lane's book misses an important opportunity to explore via the council's operations the real issues in higher education which its committees and committees regularly discuss and their influence on the lives and careers of individuals.

Mr Gutteridge is director of complementary studies at Aston University, Birmingham, and chairman of the combined studies (humanities) board of the CNAAs.

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BOOKS

Debate is the means and the end

The Philosophy of Quantum Mechanics
by Max Jammer
Wiley, £9.80
ISBN 0 471 43958 4

It is now half a century since the great synthesis in our understanding of atomic physics was achieved by Heisenberg with his matrix mechanics and by Schrödinger with his apparently very different, but significantly equivalent, formulation of wave mechanics. The new theory was immediately successful in explaining the most recalcitrant features of atomic and molecular physics as those subjects were then known, but from the moment of its inception debate on the correct interpretation of the new ideas, and on what should be our revised view of reality at the atomic or micro level, proceeded apace and has continued unabated.

These discussions have undoubtedly been encouraged by the considerable revival of interest in the philosophy of science since the early 1960s, stemming from the work of Popper and Kuhn, a reaction to the old formalist approach of Carnap and other survivors from the heady days of logical positivism and the Vienna Circle. This has led to a much more realistic interest in the historical growth of scientific theories, and in particular the quantum theory.

In *The Philosophy of Quantum Mechanics* Professor Jammer details the historical development of the various philosophical interpretations. To achieve success in such an undertaking one must combine historical sensitivity with philosophical perspicacity and both of these with the physical insight to understand and evaluate the theories involved. Finally, one needs the mathematical competence to negotiate the increasingly sophisticated mathematical milieu in which discussions of the foundations of quantum mechanics are conducted. On all four counts Max Jammer must be highly commended. His unusual talents were already recognized by Einstein who wrote an enthusiastic foreword to Jammer's first essay in historical science and philosophy, *Concepts of Space*, which appeared in 1954. Other works in the same vein have followed, and in 1966 Jammer published his magnum opus, *The Conceptual Development of Quantum Mechanics*, which was mainly concerned with developments leading up to the original formulation of the theory. The present work, although entirely self-contained, can be regarded as a

sequel to the previous one covering the story of rival interpretations from 1925 to the present day.

There is absolutely no comparable work on the subject. Most books which have hitherto appeared on the philosophy of quantum mechanics have been polemical in style, promoting one particular point of view, and discussing opposing views only insofar as they may be discredited. An exception was the recent work by D'Espagnat, *The Conceptual Foundations of Quantum Mechanics*, which remains probably the best introduction to the philosophical problems involved. But D'Espagnat's book covers a much narrower field, is rather poorly documented, and is written at a fairly elementary level. Jammer's book by contrast is a work of genuine scholarship, with comprehensive coverage of the literature of the subject. Jammer is particularly conscientious when delving into the history of blast and counterblast which characterizes the literature. After an exchange of papers attacking each other's points of view one is sometimes left wondering whether the last paper published silenced the adversary by weight of argument or by mere exhaustion. Jammer is usually ready to fill in the final picture by reference to private correspondence or recorded interview with the protagonists.

After an introductory section summarizing von Neumann's Hilbert space formulation of quantum mechanics, Jammer elaborates on the early interpretations. For Schrödinger physical reality was waves, for Born particles, for de Broglie, with his theory of the double solution, particles guided by waves. Jammer gives a very good account of Heisenberg's indeterminacy relations and Bohr's complementary interpretation, and stresses that the latter was by no means derived from the former. Indeed, Bohr emphasized that Heisenberg's discussion of the indeterminacy relations already presupposed wave-particle duality by employing for example de Broglie's relations between wavelength and momentum of a particle.

To Heisenberg the true nature of atomic particles transcended, and indeed united the wave and particle pictures, and this unification was exemplified for him by the Jordan-Klein-Wigner second quantization formalism. But within a Jammer or two Bohr's ideas on complementarity, that microphenomena were to be apprehended only in terms of classical concepts, the essential nature of quantum mechanics being the limitation on the simultaneous applicability of these concepts en-

gendered by the ineradicable quantum of action, developed into the new orthodoxy, the so-called Copenhagen interpretation of quantum mechanics.

The majority of working physicists were content to accept an essentially instrumentalist view, the new theory actually "worked" enabling one to predict the results of statistical experiments, and if one wanted some metaphysical back-up, well, had not Bohr got everything sorted out, always emerging victorious from his famous debates with the ever-doubting Einstein? Anyway, the centre of interest in the foundations of theoretical physics had rapidly shifted to dealing with extensions of the original theory to relativistic systems and systems with an infinite number of degrees of freedom, where all kinds of internal technical difficulties arose beside which the philosophical difficulties of interpreting the original theory (to which Jammer confines his discussion) seemed relatively unimportant.

But always there were the individual voices, Einstein, Popper and Margenau in the 1930s, Bohm and Landé in the 1950s, and the orthodoxy. Jammer devotes two chapters to a very detailed account of the arguments between Bohr and Einstein, which is followed by a chapter on hidden variable theories. Jammer argues, I think correctly, that Einstein's well-known ideas as to the incompleteness of quantum mechanics supported a belief that progress would involve a radical refinement of classical concepts rather than the essentially reactionary idea of hidden variables which might serve to renege a rather classical view of ultimate micro-reality.

Adherents of Bohr had long sheltered from more detailed interpretations behind the comforting rigour of von Neumann's famous proof of the impossibility of supplementing the limited probabilistic account of the orthodox theory by an apparatus of so-called hidden variables. But in the 1960s von Neumann's proof was finally challenged, not for its rigour, but by calling in question the reasonableness of its assumptions. This line of thought, initiated by Bell, has led to much critical discussion of hidden variables, and has been a major factor in all attempts at "demystifying" quantum mechanics, although non-local features tend to make hidden variable theories mysterious in their own right. Jammer's discussion of this tangled area is very clear, although he fails to give credit to Margenau and Cohen for anticipating a special case of Kochen and

Specker's results, and he does not refer to the interesting recent attempt of Fine to circumvent hidden-variable proofs without resorting to contextuality, or the latter's criticism of the Bell-Wigner non-locality arguments.

But just as a more classical approach to the interpretation of quantum mechanics has appeared as a possibility, a new school of thought has arisen which seeks to restore the non-classical features of quantum mechanics at a very fundamental level, to wit a revision of logic itself, the introduction of a so-called quantum logic. Jammer discusses very thoroughly the background to these ideas, and includes a useful appendix on lattice theory, the formal tool for much of this development.

Jammer discusses the theory of measurement in the final chapter. This topic has tended to dominate many discussions of the philosophy of quantum mechanics, but Jammer devotes only 50 pages out of a total of over 500 to it. Although he mentions most of the relevant literature on measurement he does omit the work of Jauch, whose views on solving the consistency problem in Bohr's approach, how one can extract a classical description of measurement from a quantum mechanical description of the measuring apparatus, merit more serious attention than they have hitherto received. Also he does not emphasize in this connexion ambiguities inherent in the ignorance interpretation of mixtures which vitiate many of the formal discussions on measurement as has been argued eloquently by Peck.

Jammer's style is at times journalistic. We read of Schrödinger "strolling along Berlin's Unter den Linden" discussing his new ideas with Einstein, or of Bohr who "thought it his duty to take up the cudgels" against Einstein. This may make the book more entertaining, but detracts a little from its scholarly character. The book is also marred by misprints, and there is no subject index. But these are negligible criticisms and all serious students of the philosophy of quantum mechanics must stand indebted to Professor Jammer for his most painstaking work, and if the final impression left with the reader is one of incompleteness, it is due to the author rather than to the book. Jammer's book is a question without settling it than to settle a question without debating it."

M. L. G. Redhead

Supernova remnants et al

Space Physics: The Study of Plasmas in Space
by R. L. F. Boyd
Clarendon Press: Oxford University Press, £3.50
ISBN 0 19 851807 2

Argument as to whether or not the cost and effort of putting man in space was worthwhile is necessarily inconclusive, but there can be no doubt that the technology involved has provided a platform for scientific experiments which have greatly enhanced our knowledge of the nature of the physical universe in which we live. In addition to being able to carry instruments into space to measure the physical conditions there, the rocket and the space shuttle have also made it possible to observe radiation directed towards the earth from space in regions of the electromagnetic spectrum previously screened from us. So much interest has been aroused in the study of the space environment that the scientific community are now widely known.

This title is part of the Oxford Physics series which is designed to cover the material required in degree courses in physics. In this series, texts on the core material are supplemented by more specialized volumes. This volume falls into the last category and gives, in less than 100 pages, a very readable survey of the field. The title *Space Physics* is, of course, a grandiose one to be offered in such a short compass, but the limitation imposed by the title suggests more accurately that the book is a survey of the field. Throughout, emphasis is placed on the experimental methods used to study the physical parameters of accessible space plasmas such as those surrounding the earth and planets and the radiation belts from other plasmas.

The book is arranged so that each of its four chapters is devoted to one of the major topics of space physics. The first two chapters cover the earth (and other planets), the properties of which have been measured by actually flying instruments through them, viz: the ionosphere and the magnetosphere.

The discussion of the latter chapter two shows that the ionosphere and magnetosphere are physical phenomena occurring in plasmas. The book is a very accessible introduction to the subject, and is particularly useful for students of space physics.

Plasma Physics has developed in recent years largely out of the impetus of research on controlled thermonuclear fusion. It is now falling into shape as an organized body of knowledge, and gradually entering the syllabus of university courses. This book evolved from the lectures given at an advanced summer school at Les Houches in 1972. It is, in fact, a collection of short monographs, each written by a leading physicist by authors who have themselves made significant contributions to the development of the subject. The title of section one, 'Collective Ion-Sphere Processes in Unmagnetized Plasmas' might be regarded as a little misleading, as it includes a chapter on Debye shielding, bremsstrahlung and optical transitions induced by plasma interactions. The last of these is of considerable interest, not least to astrophysicists, and physics students of other branches of physics.

Part of section two, 'Linear Waves and Instabilities', is devoted to forward electrostatics and is not peculiar to plasmas; less attention is paid to the kinetics of the plasma. Perhaps the most useful part relates to the discussion of absolute and convective instabilities. Non-linear

Gang warfare

From Radicalism to Socialism: Men and Ideas in the Formation of Fabian Socialist Doctrines, 1881-1899
by Willard Wolfe
Yale University Press, £8.75
ISBN 0 300 01303 5

There is a received view of the early Fabians which treats them as a coherent group which fostered its ideology upon the British labour movement. Both parts of that proposition are open to serious question. The coherence of the Fabians—even of the old gang of Webb, Shaw, Olivier, Bland, Wallas and Pease, which held together more by affinities of personality than by political agreement—has been oversimplified. The inner history of the society was punctuated by disputes about policy and tactics: it was a style of tolerance rather than theoretical consistency which enabled the society to survive. The attitude of the dominant Fabians towards the Independent Labour Party (ILP) and the emerging Labour Party between 1893 and 1912, moreover, shows that they were indifferent to independent labour politics and often actively opposed. If there is a clear line of descent from the first Fabians to the modern Labour Party it is on the wrong side of the blanket—through Ramsay MacDonald, who flung out of the society in irritation at the old gang, rather than through the Webbs and Shaw.

Willard Wolfe's excellent and lively study clearly reveals the differences between the founding Fabians. Because he ends with the publication of *Fabian Essays* he does not trace the continuation of those differences in the later development of the society. Had he done so, I suspect he might have been less sure about the underlying argument of his book—that Fabianism was a distinctive strain of Radical socialism which provided the ideological framework of the Labour party. While it is true that some elements in the mélange of ideas loosely called Fabianism were thus assimilated it is significant that the leading Fabians broke with their Radical origins early in the nineties and that the society which retained its links with the left wing of the Liberals, the ILP and the more politically-minded trade unionists who slowly coalesced

into a gradualist Labour Party. It is stretching the definition of Fabianism too far (away from its base in the intellectual proletariat of London) to make it cover the provincial enthusiasts who looked to Hardie and Blatchford and built up a labour movement which was disliked and distrusted by the Fabian old gang, busy with its flirtations with Tories and Liberal imperialists and dreaming of a party of national efficiency.

Wolfe's account of the differing contributions of the essayists, however, is a welcome contrast to the practice of lumping them together. There never was a Fabian orthodoxy and he shows why. The first Fabians had much in common. The crisis of faith which was common toapsed Evangelicals and the psychology of depression which accompanied that sense of loss affected them all. They shared Olivier's desire for "a human religion". They felt that social change was a moral imperative. Yet in the course of the nineties Shaw moved from Georgist and anarchist views through Marx to Leninism. Olivier and Webb were essentially positivists who saw socialism as a means of regenerating society. Annie Besant passed through the Fabians as one of a series of conversions between the Oxford movement, socialism and theosophy. Clarke and Wallas were positivists who were as much concerned with the oppression of orthodox religion as with the doubtful prospects of social improvement.

The neat intellectual biographies in which Wolfe sketches these distinctions will do much to dispel the conventional view of the essayists, but there are some gaps in his analysis. I think he underestimates the links, in the first years, with the Social Democratic Federation and fails to emphasize the impact of the fiasco of internationalism on Bloody Sunday. He does not note sufficiently the early divergence of the London Fabians from the provincial socialists (of great significance after the appearance of *Fabian Essays*) or bring out the continuing links between the Fabians and the Fellowship of the New Life. And wailing in the wings, just beyond the chronological scope of this book, are two more vital figures—MacDonald and Beatrice Webb. Perhaps there was no place for them here. But they were as any of the principals were to epitomize the two quite different directions in which Fabianism was to move after 1890.

Norman MacKenzie

Elizabethan marketing

The City of London in International Politics at the Accession of Elizabeth Tudor
by G. D. Ramsay
Manchester University Press, £6.75
ISBN 0 7190 0585 X

Here is the first half of a close study of "the end of the Antwerp mart", perhaps the most vital aspect of English economic development under Elizabeth I. It is a complicated tale which draws particularly upon the relations of traders and governments. Commercial regulation was a royal prerogative and much of Europe's economy hung upon the peace-or-war decisions of its sovereign princes. The Antwerp "stop of trade" with England (1563-64), the climax of the book, is a case in point. It arose partly from Philip II's distrust, fed by his advisers, for that opulent cosmopolitan community; he saw it as a haven of heretics, too respectful of restless nobility, too jealous of its own municipal immunities to fit into a centralizing, hispanic scheme of things. Let Antwerp take an economic beating. Men like Cardinal Granvelle, convinced of England's utter dependence upon the Netherlands market, also saw the embargo as provoking a notoriously uncommensurable

Plague in England was merely the excuse for an elaborate but ill-considered action. When trade opened again English merchants who had been used to look for outlets elsewhere, did it voluntarily.

Dr Ramsay's detailed investigation into Antwerp's supremacy in "the growing Northern European economic entity" suggests that it was always a little illusory. Anglo-German relationships, ambivalent but peculiarly important in these years, broke the monopoly by encouraging the transfer of the cloth mart to Emden. In the short run that move was a failure—dyeing facilities, for instance, were inadequate—but Emden did give some merchant adventurers a base for forays southward, a provident move for outward-looking marketing efforts. In 1564 they went back to Antwerp—but things were never quite the same. What followed will be the main theme of Dr Ramsay's second report. This summary follows only one of many threads in Dr Ramsay's rich and stiff with essential narrative. It is not easy to take in all at one reading. Another strand follows London itself and how a firm nexus was forged between the Court and "the great capitalist merchants" of the City—"an interdependence that lasted until 1640".

BOOKS

Trade union story

The Labour Movement in Europe
by Walter Kendall
Allen Lane, £10.00 and £5.00
ISBN 0 7139 0499 2 and 0685 5

In continental Europe the development of industrialization occurred later than in Britain, national identities often kelled comparatively recently and in many cases, basically feudal political structures survived until 1914. Such circumstances moulded the development of the various labour movements so that the British-United States experience has many of the marks of an untypical, special case. In France and Italy there was little tradition of the single-minded profit-oriented entrepreneur of Britain or the United States, treating all economic relations in terms of a narrow cash nexus. Employers were typically small, paternalistic, and jealous of their managerial prerogatives. Trade unions accommodated to this with weak organization at the workplace, little evidence of the Anglo-Saxon priorities of "business unionism", and a subordination of industrial to political priorities. In Italy, in particular, the dominance of political over trade union organization was reinforced by the circumstances of the emergence from war and fascism: union organization, previously smashed by Mussolini, was reconstructed under the hegemony of highly centralized socialist, communist and Roman Catholic political parties.

In Germany the subordination of unions to political parties dates back to their nineteenth-century origins where there was no possibility of free collective bargaining under the Kaiser, and the centrality of the political struggle was for democratic rights. The gradual assertion of trade union autonomy was brutally checked by the rise of Nazism. The unions' postwar revival was shaped by the priorities of the new powers; this fact, together with the ever-present fear of the eastern neighbour, helps explain their much-vaunted lack of militancy. In the Netherlands, too, unambitious and collaborative unionism owes much to the spirit of national unity of the postwar government, previously in exile, labour is in any case weakened by political-religious divisions. Similar factors apply in Belgium where the Flemish-Walloon antagonism is one source of disunity in a labour movement which numerically appears one of the strongest in Europe.

Kendall's approach outlines the historical development and current position of trade unionism and industrial relations in each of these five countries in turn, together with Britain. There is a brief discussion of transnational trade union organizations—still sadly rudimentary—and of the union response to the multinational motor giants, and the concluding chapter draws together a number of themes from his analysis.

For a writer of Kendall's manifest talents, this is a disappointing book. The national chapters are in many cases pedestrian, drawing largely on secondary accounts. For example, Italy he uses a variety of local sources, but for the other continental countries he is heavily dependent on previous English language publications. Much of the text appears to have been written before 1973, the dramatic transformation of European industrial relations—the French events of 1968, the German strikes of 1969 and 1973, the Italian "hot autumn" of 1969—are treated cursorily if at all. The rapid growth in Italian union membership in the last few years is simply not apparent in the otherwise useful tables. The book's contents are at times repetitive and for so highly priced a publication the number of misprints is remarkable. More fundamentally, the country-by-country approach is singularly unimpressive: only in the brief final chapter is a serious comparative approach attempted. It is a potentially important book which fails to realize its opening promise.



Tanner and taken? This picture of the confident nineteenth-century showman is taken from the chapter on the rise in popularity of the circus from "Festivals and Celebrations" by Roland Augier, Collins, £2.95.

Manipulating people

The Shaping of Southern Politics: Suffrage Restriction and the Establishment of the One-Party South, 1865-1901
by J. Morgan Kousser
Yale University Press, £7.50
ISBN 0 300 01696 4

In the later years of the nineteenth century a one-party system was established in the American South. In a society in which an adult male citizen could be denied a vote on grounds of race or creed, voter participation declined sharply and political control was exercised by a tightly-knit elite of upper-class conservatives. The bedrock of the system were the legal devices and social customs which disenfranchised most black voters and many lower-class whites. C. Vann Woodward attributed these restrictions mainly to the fear of a new "bourgeois" rule at the turn of the century. V. O. Key saw the laws as the codification of segregation patterns which followed upon the failure of Reconstruction. The principal conclusion of Mr Kousser's book is that disenfranchisement was the outcome of a sustained policy, directed by upper-class leaders against the threat to their power presented by a real party system.

"The system which ensured the absolute control of predominantly black counties by upper-class whites, the elimination of the areas of parties as a means of organized competition between politicians, and, in general, the non-representation of lower-class interests in political decision-making was shaped by those who stood to benefit most from it—Democrats, usually from the black belt and always socioeconomically privileged."

The year 1877 is conventionally accepted as the "end" of Reconstruction, but Kousser demonstrates conclusively that political conflict did not die until deliberately extinguished. The Republican party remained in being, and did not immediately divide away to feeble local organizations kept alive on federal patronage; though terrorism kept many blacks from the polls, many others continued to vote and support the Republican ticket; support for the party also remained strong in the "white" counties. Sporadic opposition to the Democrats came also from Independent, Alliance, Populist and Fusion candidates. In several states it would not have required much encouragement to transform opposition into an alternative government, and the Lodge Bill of 1890 threatened to do so by providing effective federal supervision over registration and voting.

The Lodge Bill—lost by one vote in the Senate—set off a round of disenfranchising measures, and a second round followed when Populism bit into Democratic support and threatened to floss black and white Republicanism. The path ahead had been clear, but the

separate ballot boxes for each elective office, and ballots in the wrong box were void; since all election officials were Democrats, illiterate blacks got no help. The secret ballot was also an instrument of disenfranchisement. Before 1888 parties printed their own ballots and distributed them to voters; from 1888 onwards various states passed secret ballot laws which meant that the voter was presented at the polling place with a single list containing a bewildering number of names. In the north the secret ballot led to a drop in immigrant voting, and this was sometimes claimed as an incidental benefit; in the south its deliberate aim was to cut down voting numbers. A striking example of its effect was found in Tennessee, where black and white Republicans had held down the Democrats to a bare statewide majority and usually carried two or three Congressional districts; the secret ballot destroyed Republican strength in west and central Tennessee, leaving them dominant only in the east where white Republicans formed a majority of the population.

Thus, then, is a close analysis, buttressed by statistics, of the way in which the dominant group can become entrenched in power by manipulation of democratic processes. It will appeal to Marxist historians, and would have gladdened the heart of W. E. B. Dubois. There are some reservations to be made. Kousser is writing about the policy, not the practice, of the policy, and naturally emphasizes the policy of the upper class; but it is not only an organized upper class which can play this game. He is fashionably free with the word "racist" as a term of abuse; it might be better to accept the fact that almost all nineteenth-century whites believed that their race was superior, and differed only on the best way of treating inferiors. He does not always make it clear that the disenfranchisement of poorer whites was possible only in a bi-racial society; in other circumstances political opposition might have been tougher and more effective. These points are, however, peripheral to his main purpose, which is to reveal and interpret the political statistics which underlie his argument. He assures readers that they need not understand "ecological regression technique" in order to grasp his meaning, and claims that he has kept technical matters to footnotes and appendices. Nevertheless his presentation illustrates the dilemma of all quantifiers. Quantification is invading many fields of historical research, and how far ought it to intrude upon the writing of history? The frequent tables in the text may make truth self-evident to the initiated, but they certainly interrupt a coherent and clearly written account. If Kousser had put his findings into vigorous prose, his book might have had an impact comparable to Vann Woodward's *Struggle for Mastery* as it is, one hopes that he will earn the professional approbation that he deserves.

Fourier analyses

Basic Pure Mathematics II
by L. E. Vaughan
Van Nostrand, £3.50 and £1.50
ISBN 0 442 30048 4 and 30049 5

Fourier Series
by N. G. V. Baker
Chatto and Windus/Collins, £4.50 and £2.00
ISBN 0 00 460910 and 460907 7

Elementary Classical Analysis
by J. Marsden
W. H. Freeman, £7.10
ISBN 0 7167 0452 8

"best-possible" mean convergence results and rather emphasizes the pointwise behaviour, which is also discussed by Marsden.

Marsden is a very complete treatment (modern in approach but conventional in notation) of advanced calculus and real analysis (omitting, unlike most American books, the Stokes theorem material). Elementary calculus is needed first but then everything is proved. (The completeness of the reals is assumed with due flourish of trumpets in the form of the convergence of an increasing sequence, bounded above.) The chapter on Fourier series, in particular, is a gem. It is smaller than the end of the book, but the significance (the use) of the theorem is understood, and there are plenty of exercises.

Plasma Physics
edited by C. DeWitt and J. P. Freid
Gordon and Breach, £17.40
ISBN 0 677 15740 1

Plasma physics has developed in recent years largely out of the impetus of research on controlled thermonuclear fusion. It is now falling into shape as an organized body of knowledge, and gradually entering the syllabus of university courses. This book evolved from the lectures given at an advanced summer school at Les Houches in 1972. It is, in fact, a collection of short monographs, each written by a leading physicist by authors who have themselves made significant contributions to the development of the subject. The title of section one, 'Collective Ion-Sphere Processes in Unmagnetized Plasmas' might be regarded as a little misleading, as it includes a chapter on Debye shielding, bremsstrahlung and optical transitions induced by plasma interactions. The last of these is of considerable interest, not least to astrophysicists, and physics students of other branches of physics.

Part of section two, 'Linear Waves and Instabilities', is devoted to forward electrostatics and is not peculiar to plasmas; less attention is paid to the kinetics of the plasma. Perhaps the most useful part relates to the discussion of absolute and convective instabilities. Non-linear

Not experimental

"Linear Effects", discusses what is known as quasi-linear theory and then mode-mode coupling. It is clear that these non-linear effects constitute a large field (not necessarily large in size and will continue to attract much attention). The fourth section, 'Atomic and Molecular Processes in Ionized Gases', belongs to the older field of gas discharges rather than to plasma physics. It is none the less important, for that. Cases which are 100 per cent ionized exist only in theoretical papers and not in the laboratory. Section five deals with the Kramers-Kronig relations, the fluctuation-dissipation theorem (topics not peculiar to plasmas), i.e. a description of the number of particles within the Debye sphere or less than one. The final section, 'Strongly Magnetized Classical Plasma Models', contains a statistical model of a two-dimensional plasma, guiding-centre plasmas in two and three dimensions, and a relaxation of the model to include finite Larmor-radius effects.

I note that only the first of the five plasma contributions contains comparisons with experiments—presumably the large machines built at the taxpayers' expense are spending our valuable results which are compared with theory. The book is uniformly in appearance looking as though an ancient typewriter has been employed, and is extremely expensive and will be limited mainly to specialist libraries.

Form before language

These relatively minor points aside, this book is wholeheartedly recommended to all students of Stockhausen's work. It is an intelligent and perceptive study of one of the most interesting musical minds of the century.

In these circumstances, it might seem all the more important that Schoenberg's own attitude and ideas, as expressed in his prefaces, writings, should receive wide circulation. It was a particularly articulate exponent of those aspects of his own music which aim to ensure unity and comprehensibility, and which also link him closely with certain more immediately appealing neo-romantic contemporaries, notably Brahms and Mahler. The original edition of *Style and Idea*, published in 1950 and containing the preface, was intended for the specific purpose of asserting Schoenberg's traditional qualities and presenting his personality in

It is the Schlegelian blend of intellectual rigour and involuntary inspiration which is most strikingly illuminated in the book. "Nothing is more unpopular than brain" is a pertinent theme in "Robert Schumann as Critic" (1931), but it follows hard on the assertion that "what occurs to one as 'inspiration' is not the theme but the work."

[illegible]

offer no simple solution for the economist battling with the ethical foundations of welfare economics. But there is an optimistic tone to the Hicks essay, based on what he considers to have been the step by step progress over the past 30 years achieved within the framework of the basic postulates of consumer behaviour—a view of economic science which is discussed in other essays in this volume, and principally in the two contributions to the debate on equilibrium economics.

The essays in the second part of the book range widely over aspects of employment, and structural change, planning, education, fiscal and monetary policies. No one could criticize their authors for overlooking, or assuming away, the realities of the Indian situation. Underlying most, and echoed in accounts of empirical work, is a deep concern with the problems of the rural sector, and the need for otherwise of "new" development strategies aimed at building up the rural economy. In the essays by Louis Lefebvre, A. Vaidyanathan and P. H. Prasad, there is a broad measure of agreement that the problems of the rural sector are far more complex than have been implied by government policy which has aimed to divert larger shares of investment funds into rural areas, given both the slow spread of known improved techniques of production, and what appears from empirical evidence to be the worsening plight of the rural labourer, experiencing a steady decline in real wages. What is being argued out in these essays, with varying degrees of emphasis, is the need for a radical and fundamental transformation to take place in India, within the existing economic and social framework.

The maps cover many aspects of Namibia including geology, education, electoral patterns and external boundaries. Subjects, such as Kingship and Land Use, considered in greater detail than others. The quality of the cartography is extremely good and with few exceptions the source of information is acknowledged. The temptation has been avoided of trying to put too much information on a single map; consequently, with rare exception, such as that showing African population density, the Kingship, and Land Use maps, give a clear impression of the spatial distribution of the

Advertising became in Victorian times an organized business—even Queen Victoria herself appeared on a poster drinking branded tea. Picture taken from "Rule Britannia: The Victorian World" edited by George Perry and Nicholas Marou. Times Publications. £5.95.

Barbara Ingham, professor of economics at Birkbeck College, London, has published *Critical Essays on George Elliot* and *The Exposure of Rudolph Thomsen* in "MacKenzie".

Norman MacKenzie is the director of the Centre for Educational Technology and Acting Director of the School of Education at the University of Sussex; he has a forthcoming book, *Man in Society* (M. L. G. Redhead is rising

other obscure. Basically, it is a procedure for comparing the relative merits of different courses of instruction, reading programmes, etc. Normally in educational testing, the problem of interest is the ability of the student to understand in multiple-matrix sampling groups. The results are assigned only subsets of the population of test items and from the results obtained, inferences are made about the performance of the whole population of student on the whole of the items in the test. The book is intended for those wishing to apply the test formulae given but not derived. In this sequence, the book is of very limited interest; although there is a comprehensive bibliography. Of the book's three hundred pages, two hundred has computer programmes and sample outputs. It would have been better if the text of the book were written with the computer programmes available as an additional extra.

Lindman's book is an extensive account of analysis of variance calculations. The book uses no calculus and is suitable for students of psychology and other sciences. In the main, the explanations are clear. The book of this type a major effort to make a book be made to give as many examples of real data as possible; the examples of the kind "hypothetical data, shows versus intelligence test scores for 26 randomly selected school children are not really convincing. The author then takes the time to apply the analysis of variance to the data.

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Free university amsterdam

At the Institute for Professional Training of High School Teachers, Free University, Amsterdam there is a vacancy for the office of

director/directress

The Institute is a cooperative community of general and subject teaching methodologists.

Task-description:

The appointee will be charged with

- the scientific guidance of the development of teaching-programs of the Institute;
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The directory is supplemented by an administrative manager and executes its activities in cooperation with the council of the Institute.

It is being considered that the appointee should be a teaching methodologist (either majoring in educational psychology or any subject teaching method) with a special interest in the educational aspects of the training of high school teachers at university level; experience in this connection might be considered a recommendation.

Appointees are expected to concur with the christian objective of the Free University.

Written applications, mentioning vacancy number 763-2196, are expected preferably before September 1, 1975 at the Dpt. of Personnel Affairs, De Boelelaan 1108 (Postoffice Box 7161), Amsterdam (Netherlands).

AUSTRALIA

UNIVERSITY OF WESTERN AUSTRALIA
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Applications are invited for the position of Lecturer in Psychology. The successful candidate will be responsible for the teaching of Psychology to students in the Faculty of Education and for the supervision of research projects. The salary is \$20,000 per annum.

Applications should be sent to the Director of the Faculty of Education, University of Western Australia, Perth, Western Australia 6001. Closing date: 15 September 1975.

AUSTRALIA

UNIVERSITY OF WESTERN AUSTRALIA
Perth
Economics

Applications are invited for the position of Lecturer in Economics. The successful candidate will be responsible for the teaching of Economics to students in the Faculty of Education and for the supervision of research projects. The salary is \$20,000 per annum.

Applications should be sent to the Director of the Faculty of Education, University of Western Australia, Perth, Western Australia 6001. Closing date: 15 September 1975.

AUSTRALIA

MONASH UNIVERSITY
Melbourne
OBAN OF PHYSICS

Applications are invited for the position of Lecturer in Physics. The successful candidate will be responsible for the teaching of Physics to students in the Faculty of Education and for the supervision of research projects. The salary is \$20,000 per annum.

Applications should be sent to the Director of the Faculty of Education, Monash University, Melbourne, Victoria 3000. Closing date: 15 September 1975.

HEAD OF DEPARTMENT

In August, 1973, the Melbourne State College, at that time the Melbourne College of Education, became an autonomous institution as a constituent college within the State College of Victoria, Australia. The College is in a phase of development business district of Melbourne. Its current enrolment of 3,800 equivalent full-time students makes it the largest centre for teacher education in Australia. The College is in a phase of development towards the award of degrees; one of the four-year courses leads to the award Bachelor of Education and accreditation with respect to another four-year course is being pursued. Heads of most of the teaching departments were appointed early in 1975, but several vacancies have not been filled.

The College wishes to make further appointments commencing with the positions named below.

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Salary: \$20,202 (Australian) p.a.
Assistance will be provided with relocation expenses.

Closing date: Friday, 19 September, 1975.

Further information about each position, including method of application, may be obtained from:

The Registrar
Melbourne State College
757 Swanston Street Carlton Vic. 3053
Australia

Please mark correspondence 'Attention Staff Office'.

FU BERLIN

An der Freien Universität Berlin sind folgende Stellen zu besetzen:
Im FB 17 - Neuere Fremdsprachliche Philologien - oder an der FB 4 - Zentralinstitut Sprachlehre - zum 1.10.75 die Stelle zweier:

Akademischer Räte und Lektoren (AH 1/AH 2)

für Englische Sprachpraxis.

Aufgabenbereich:
(a) Übersetzungspraxis, Grammatik, Phonetik und Phonologie.
(b) Übersetzungspraxis, Grammatik, Essay, Writing, Oral Practice, and Testing.
(c) Einstellungs- und Einstellungsfragen:
zu (a) B.A. (double honours) oder M.A. oder B.A. oder schottischer M.A. und Diploma of Education oder Diploma of Applied Linguistics oder TEFL Certificate oder CELF Certificate in mindestens einer lebenden Sprache, Lehrfahrung und gute Deutschkenntnisse.
zu (b) B.A. (double honours) oder M.A. in mindestens einer lebenden Sprache, Lehrfahrung und gute Deutschkenntnisse.

Bewerbung ist bis zum 1. September 1975 an den Akademischen Räten der FU Berlin, Postfach 10 15 5, Berlin 15, zu richten.

Die Bewerberinnen und Bewerber müssen die folgenden Bedingungen erfüllen:
(a) Vertiefte Kenntnisse in der englischen Sprache.
(b) Vertiefte Kenntnisse in der deutschen Sprache.

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(b) Vertiefte Kenntnisse in der deutschen Sprache.

ABERDEEN

THE UNIVERSITY
ASSISTANT DIRECTOR OF
PHYSICS
RESEARCH

Applications are invited for the position of Assistant Director of Physics Research. The successful candidate will be responsible for the supervision of research projects in the Department of Physics. The salary is \$20,000 per annum.

Closing date: 15 September 1975.

Applications should be sent to the Director of the Department of Physics, University of Aberdeen, Aberdeen, Scotland AB9 8QY.

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Universities continued

UNIVERSITY OF THE WEST INDIES—JAMAICA

Applications are invited for the following posts:

(a) DIRECTOR OF REGIONAL PRE-SCHOOL CHILD DEVELOPMENT PROJECT

In the Department of Extra-Mural Studies. Applicants should have training, experience and competence in: Administration, Child Development and Education. The project, which aims to encourage and improve services for the pre-school child throughout the West Indies, will be centred around a Pre-School Child Development and Training Centre located on the Mona campus in Jamaica. This centre will embrace the following principal functions:

- Operation of a model day care centre;
- Training of personnel from the region, principally for supervision of day care programmes;
- Facilitating research in child development;
- Development of parent education programmes;
- Promotion of regional seminars and workshops;
- Dissemination of relevant information and programmes throughout the region.

(b) SENIOR RESEARCH FELLOW/RESEARCH FELLOW INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH

Candidates must be specialists in Monetary Economics, with a good honours degree in Economics, with graduate work and research experience. The Institute of Social and Economic Research is a part of the Regional Programme of Monetary Studies which the Institute of Social and Economic Research is conducting on behalf of the Central Bank and monetary authorities of the region. It will be expected to direct and supervise research projects, as well as undertake research himself.

Salary scales: Senior Research Fellow J\$8,480-J\$12,402 p.a. Research Fellow J\$6,480-J\$8,480 p.a. (J\$1 sterling = J\$10.00). The successful candidate will be required to undertake research in the field of Monetary Economics, with a view to the publication of research findings. The successful candidate will be required to undertake research in the field of Monetary Economics, with a view to the publication of research findings.

Further particulars may be obtained from the Director of the Institute of Social and Economic Research, University of the West Indies, Mona, Jamaica.

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CAPE TOWN

THE UNIVERSITY
LEARNERS AND ASSISTANT
TEACHERS IN THE
DEPARTMENT OF
EDUCATION

Applications are invited for the position of Learners and Assistant Teachers in the Department of Education. The successful candidate will be responsible for the supervision of research projects in the Department of Education. The salary is \$20,000 per annum.

Closing date: 15 September 1975.

Applications should be sent to the Director of the Department of Education, University of Cape Town, Cape Town, South Africa.

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Applications should be sent to the Director of the Department of

Polytechnics continued

Queen Margaret College
EDINBURGHConsumer Education and Research
APPOINTMENT OF
DIRECTOR of CENTRE

Applications are invited for appointment to this newly-established post in charge of a Centre for Consumer Education and Research (CERES) set up to develop the on-going commitment of the College to work in this field. Queen Margaret College, founded in 1875, is a Scottish Central Institution offering courses at Degree and Diploma level. The curriculum of the College includes full-time courses in Home Economics, Institutional Management, Dietetics, Nursing, Health Visiting, Speech Therapy and Drama.

Salary scale £8,000-£7,716 per annum.

Application forms and further particulars from:

The Secretary, Queen Margaret College,
38 Clerwood Terrace, Edinburgh, EH12 8TS. Tel: 031-334 8111.

LONDON
THAMES POLYTECHNIC
SCHOOL OF CIVIL
ENGINEERING
LECTURURER GRADES II

Applications are invited from civil engineers with a degree and professional registration. The successful candidate will be responsible for the teaching and supervision of students in the School of Civil Engineering. The post is full-time and involves a heavy teaching load. The successful candidate will be expected to register for a higher degree.

LIVERPOOL
THE POLYTECHNIC
SCHOOL OF CIVIL
ENGINEERING
LECTURURER GRADES II

Applications are invited from civil engineers with a degree and professional registration. The successful candidate will be responsible for the teaching and supervision of students in the School of Civil Engineering. The post is full-time and involves a heavy teaching load. The successful candidate will be expected to register for a higher degree.

ABERDEEN
ROBERT GORDON'S
INSTITUTE OF TECHNOLOGY
SCHOOL OF ARCHITECTURE
LECTURURER IN BUILDING
SCIENCE AND SERVICES

To teach Environmental Science and Design for B.Sc. (Hons) Architecture and Diploma in Advanced Architectural Studies. Research and consultancy encouraged. Salary range £3,216 to £6,400.

Fellowships and
StudentshipsLANCASTER
THE UNIVERSITY
PROFESSIONAL FELLOWSHIP
IN STATISTICS

Applications are invited from professional statisticians and other qualified persons for a Professional Fellowship in Statistics. The Fellowship is full-time and involves a heavy teaching load. The successful candidate will be expected to register for a higher degree.

Announcements

Overseas

LIBYAN ARAB REPUBLIC

BENGHAZI UNIVERSITY

FACULTY of SCIENCE, ENGINEERING and AGRICULTURE

Require staff to teach English. Applicants should have experience in teaching English as a Foreign language and should have a Masters or Diploma degree. The successful applicants will be teaching students who are studying technical and scientific subjects in English.

FACULTY of ARTS

Require staff with Masters Degrees or Ph.Ds. in Linguistics. The academic year begins 1st September, 1975.

SALARY RANGE
ANNUAL SALARY AND INCREMENTS IN LIBYAN DINARS

Post	Salary Range From To	Increments	Number of increments
Professor	4,800-5,200	120	6
Associate Professor	4,200-5,200	120	6
Assistant Professor	3,800-5,000	100	6
Lecturer	3,200-4,600	100	6
Assistant Lecturer	2,800-4,000	100	6

N.B.—Starting salary depends on the experience of the applicant. One Libyan Dinar is equal to £1.40.

Housing, furniture allowances and travelling expenses will be paid by the University. Medical services in Libya are free. Applicants should write to Academic Appointments Department, General Administration, University of Benghazi, Benghazi, Libyan Arab Republic.

GIPPSLAND INSTITUTE OF
ADVANCED EDUCATION
LECTURERS
IN SCHOOL LIBRARIANSHIP

Applications are invited for the position of Lecturer in School Librarianship at the Gippsland Institute of Advanced Education. Two lecturers are needed in the School of Education for newly established courses in School Librarianship, one to take up duties as soon as possible, the other to commence 1 January 1976.

This year the Institute has introduced an Associate Diploma in School Librarianship, which is being offered initially to trained teachers. A Bachelor of Education with a School Librarianship strand, catered for students who do not already have a teaching qualification. School Librarianship subjects are being taught externally, and it is likely that the majority of students in future years will be external.

Two lecturers appointed will be required to support the Senior Lecturer in developing and teaching the course both internally and externally. Applicants should have good academic and professional qualifications in teaching and librarianship, and the ability to contribute to a lively and innovative programme within the School of Education. Preferred areas of experience: Children's Literature, Curriculum Development and Multi-media Materials. Teaching experience is desirable.

GENERAL. The Institute's academic staff are expected to contribute to the teaching of their disciplines in team situations in multi-disciplinary degree and diploma programmes, in both internal and external teaching programmes. In addition to the programmes offered within their own School, staff may also be required to contribute to programmes offered within other schools.

SALARY will be according to qualifications and experience within the Institute's salary scale. Lecturers will be currently \$A(1)1,655 to \$A(1)5,644.

CONDITIONS include a superannuation scheme, provision for recreation and study leave, and an attractive staff housing scheme to provide finance for building or buying a home. For each appointee and family, reasonable removal costs and a settling-in allowance will be paid. Assistance may be provided, if required, in obtaining travel housing. Further information may be obtained from the Registrar.

APPLICANTS giving full personal particulars including qualifications, experience, present position, the names and addresses of three referees, telephone number and a small personal photograph, should be sent to:

The Registrar,

Gippsland Institute of Advanced Education
P.O. Box 42, Churchill, Victoria, Australia, 3842.

The British Council

invites applications for the following posts:

Lecturers in English (Dahomey)

University of Dahomey, Cotonou

One lecturer for Department of Education—January 1976, one for the Department of English—October 1976. Graduates with overseas TEFL experience and knowledge of French essential, preferably with TEFL qualification.

Salary: £3,385 to £4,264 p.a., tax free. Benefits: overseas and education allowances; free accommodation; medical scheme. Two-year contract. 75 HU 100, 100

Lecturers in English Language

(Singapore)

Ngee Ann Technical College

Three senior and four junior TEFL lecturers in ESP. Graduates of UK university, preferably with TEFL qualification; several years relevant experience for senior posts.

Salary: senior posts—£2,928 to £5,424 p.a.; junior posts—£1,788 to £4,836 p.a. Benefits: rent allowance; medical scheme; annual bonus. Two-year contract, renewable. 75 UO 139-139

Teacher of English (Ivory Coast)

Ecole Normale Supérieure, Abidjan

To teach English with TEFL methodology. Degree with TEFL qualification, overseas experience, good command of French essential.

Salary: £3,385 to £4,264 p.a., tax free. Benefits: overseas and education allowances; free accommodation; medical scheme. Two-year contract. 75 HU 100, 100

Teacher of English (Mexico)

Anglo-Mexican Cultural Institute, Guadalajara

Graduate with TEFL qualification and experience. Salary: £2,748 to £4,264 p.a. Benefits: overseas and education allowances; free accommodation; medical scheme; employer's pension. UK superannuation. Two-year contract. 75 UO 100 Initial enquiries: Telephone 01-499 8011, ext. 45.

Return fares are paid. Local contracts are guaranteed by the British Council. Please write, briefly stating qualifications and length of appropriate experience, quoting relevant reference number for further details and an application form to The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

Applications are invited for the following new senior academic appointments in the School of Business and Social Sciences at the Cippeland Institute of Advanced Education:

PRINCIPAL LECTURER / SENIOR
LECTURER IN ENGLISH

Applications are invited from well-qualified scholars with established research and teaching experience in post-Renaissance English literature. In particular, candidates should be able to demonstrate a capacity for academic leadership, skills appropriate to the effective teaching of external courses and the ability to prepare and teach new courses in eighteenth and nineteenth century literature. The successful candidate will be required to participate fully in the future development of a rapidly expanding multi-disciplinary degree programme which is also geared to the needs of students enrolled in other courses.

PRINCIPAL LECTURER / SENIOR
LECTURER IN SOCIOLOGY

Applications are invited from Sociologists with strong academic qualifications, extensive teaching experience and a demonstrated interest in applied social science. The successful candidate will be required to provide academic leadership and administrative co-ordination as well as teaching in one or more of the Sociology units currently offered. It is expected that an Associate Diploma in Welfare Studies will be introduced in the near future and it is desirable that the Principal Lecturer/Senior Lecturer in Sociology should have expertise and interest in that field. Candidates with experience and/or skills relevant to the development of courses for external students will be given special preference.

PRINCIPAL LECTURER / SENIOR
LECTURER IN MATHEMATICS

The Principal Lecturer/Senior Lecturer will be expected to make a significant contribution to the development and teaching of Mathematics within the Institute's degree and diploma programmes and to provide academic leadership in team teaching situations. Well-qualified candidates with appropriate experience at a senior level in tertiary education, business or industry relating to any field of Mathematics will be seriously considered. However, the Institute is particularly interested in a statistician with an interest in econometrics to its staff.

GENERAL. The Institute's academic staff are expected to contribute to the teaching of their disciplines in team situations in multi-disciplinary degree and diploma programmes, in both internal and external teaching programmes. In addition to the programmes offered within their own School, staff may also be required to contribute to programmes offered within other Schools.

SALARY will be according to qualifications and experience.

Principal Lecturer — \$A(1)8,871 p.a.
Senior Lecturer — \$A(1)5,954 to \$A(1)6,444 p.a.

CONDITIONS include a superannuation scheme, provision for recreation and study leave, and an attractive staff housing scheme to provide finance for building or buying a home. For each appointee and family, reasonable removal costs and a settling-in allowance will be paid. Assistance may be provided in obtaining travel housing. Further information may be obtained from the Registrar.

APPLICANTS giving full personal particulars (including qualifications, experience, present position, the names and addresses of three referees, telephone number and a small personal photograph) close on 31 August 1975, to:

The Registrar,

Gippsland Institute of Advanced Education
P.O. Box 42, Churchill, Victoria, Australia, 3842.

Administration

LEICESTER
THE UNIVERSITY

The Careers and Appointment Service has a vacancy for an INFORMATION ASSISTANT. The post involves organising and maintaining an up-to-date careers library containing files on employers, types of work, and postgraduate study of various kinds. The Assistant will be required to train students from the University of Leicester on the use of the Careers Service. The successful candidate will be responsible for the day-to-day work of the service.

Candidates should preferably have a degree and a minimum of two years' relevant experience. The successful candidate will be offered a salary of £2,748 to £4,264 p.a. and will be eligible for a pension scheme. The successful candidate will be offered a two-year contract, renewable. Further particulars and application form can be obtained from the Registrar, The University of Leicester, LE1 7RH.

General Vacancies

FAIRMEADOW HOSTEL

MAIDSTONE, KENT
For the rehabilitation of alcoholic men and women. Applications are now invited for a Resident Manager for this hostel. The post involves organising and maintaining an up-to-date careers library containing files on employers, types of work, and postgraduate study of various kinds. The Assistant will be required to train students from the University of Leicester on the use of the Careers Service. The successful candidate will be responsible for the day-to-day work of the service.

STUDENT CHRISTIAN MOVEMENT

CONFERENCE CENTRE
We're looking for an energetic and capable person to coordinate the team of students who will be running the self-catering conference centre at our National headquarters. Preferably with experience in running a conference centre and with an active knowledge of Christian life and radical Christianity. We're looking for someone who is a team player and who is able to communicate and inspire ideas. The successful candidate will be offered a salary of £2,748 to £4,264 p.a. and will be eligible for a pension scheme. The successful candidate will be offered a two-year contract, renewable. Further particulars and application form can be obtained from the Registrar, The University of Leicester, LE1 7RH.

CIVIL
ENGINEERING
OPPORTUNITIES
£7,600 TAX-FREE

British Aircraft Corporation has vacancies on its major defence contract in Saudi Arabia for qualified Civil Engineering personnel to undertake the following duties:

ENGINEERS - NEW WORK

Applicants for these senior posts will be required to undertake project management of the consultants and contracting works, involving liaison with clients, monitoring design and construction, together with progress and quality control.

Candidates should be aged 30-50 and have attained suitable building or civil engineering qualifications. Previous experience of light industrial and domestic installations is required, preferably coupled with previous overseas experience.

Applications for these positions are invited from U.K. citizens holding British passports. Initially, contracts are offered for a two-year period which is extendable, and salary and bonus payments are paid free of tax. Additional benefits include free bachelor accommodation and messing, medical care, personal insurance, and frequent and generous travel-paid home leave.

Please write giving personal and career details, quoting Ref. No. 334/THES, to:-

Mr. W. M. Swan,
Principal Personnel Officer (S.A.);
Saudi Arabian Support Department,
British Aircraft Corporation,
Warton Aerodrome,
Preston, PR4 1AX, Lancs.



General Vacancies

NATIONAL YOUTH BUREAU
YOUTH IN INDUSTRY
RESEARCH WORKER

£3,825-£4,095

This national resource centre for adolescent social education wishes to appoint a research worker for a new project in conjunction with a major engineering industry. The task will be to examine the situation of young workers in a large plant in the West Midlands, including the firm's relationship with schools, induction and training programmes, the relationships of young employees with older workers, supervisors, trade union officials and with their peers. The project will last for 18 months. The research worker will be employed by the Bureau but located in the firm's training department.

Further particulars and application forms (to be returned by 1st September, 1975) from: Director, National Youth Bureau, 17-23 Ainslie Street, Leicester LE1 5JH (0533-838911).

Colleges of Education

MORAY HOUSE COLLEGE OF EDUCATION
POSTS OF VICE-PRINCIPAL

Applications are invited from appropriately qualified and experienced graduates for the post of Vice-Principal, which will become vacant on 31st December 1975 as a result of the present holder's appointment as a Principal. Candidates must be eligible for registration with the General Teaching Council of Scotland and should have extensive academic and administrative experience in a major post in education, preferably related to the training of teachers. Further information and application forms are obtainable from The Principal, Moray House College of Education, Holyrood Road, Edinburgh EH8 8AQ, to whom applications should be returned by 15th September, 1975.

Kindergarten Union
of South Australia
Chief
Executive Officer

Applications are invited for the position of Chief Executive Officer of the Kindergarten Union of South Australia.

This is a new position created as a result of the passage of the Kindergarten Union Act 1975 by which the Union, first established in 1905, became a statutory body.

The Union is responsible for the staffing and maintenance of 220 kindergartens, involving approximately 700 staff and 12,000 children. These centres are established in the metropolitan area and in other areas outside the metropolitan area, up to 400 miles distant from Adelaide.

Each kindergarten is managed by a branch committee. The Union works with the Child Welfare Services Council (S.A.) and the Education Department (S.A.) in providing pre-school education, and with other voluntary and public bodies in developing integrated services for young children.

The Chief Executive Officer will be responsible to the Board of Management of the Union for the efficient management and development of the services provided by the Union and for giving leadership to staff and parents. The post will give opportunities for initiative in policy making.

A compact secretariat covering administration and finance, education, consultative, and extension services is already functioning. Long service leave, recreation leave, sick leave and superannuation benefits are available.

Duties will commence on 1st March, 1976, or such other date as may be negotiated.

Qualifications

1. Experience in a senior administrative position is essential.
2. Experience in the field of education, preferably early childhood education.
3. Appropriate tertiary and professional qualifications. If these do not include a higher degree, applicants should possess a post graduate qualification in an area appropriate to early childhood education.

Salary

Negotiable in the range \$20,000-\$25,000. Further information may be obtained from Senior Migration Officer, South Australia House, 50 Strand, London, W.C.2.

Applications, giving full details of experience and qualifications and the names and addresses of three referees, close on September 20, 1975.

All correspondence marked "Confidential" should be addressed to:

The President,
Kindergarten Union of South Australia,
108 Kermode Street,
NORTH ADELAIDE, S.A. 5006.

Colleges of Further Education

INSTITUTION OF HIGHER EDUCATION—HULL

Appointment
of Director

Applications are invited for the post of Director of this new institution of higher education, which will be designated in September, 1976, following an amalgamation of Hull Regional College of Art, Hull College of Commerce, Kingston upon Hull College of Education, Hull Nautical College and Hull College of Technology, together with the voluntary English College of Education. It is likely that the salary will be at a point within the range for a Group 10 college, i.e. £12,180-£12,690.

The County Council is seeking a Director with qualifications, experience and those other qualities appropriate to the task of leading the development of this new institution. The successful candidate is expected to take up the appointment as soon as possible so that he or she may participate fully in the advance planning prior to designation.

Further particulars may be obtained from the Director of Education, County Hall, Beverley HU17 8BA, quoting reference HC/PE. Completed applications should be returned by 15th September, 1975.

Humberside
County Council